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When Advanced Learning Programs Expand: Evidence on Access and Achievement

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This paper examines how a district-wide expansion of an advanced learning program reshaped access and short-run academic outcomes. The reform replaced an opt-in identification process with universal screening based on district assessments and expanded program capacity, resulting in larger entering cohorts and a participant pool that more closely reflected the district's student population. Following the reform, the achievement gap between program participants and their non-participating peers narrowed, particularly in math, with variation across entering cohorts closely related to cohort composition. To separate compositional shifts from changes in achievement after enrollment, we re-estimate the model with student fixed effects. These estimates show little evidence of a change in the achievement gap, indicating that compositional shifts account for much of the observed narrowing. These findings suggest that broader access need not come at the expense of participants' academic progress.

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When Advanced Learning Programs Expand: Evidence on Access and Achievement

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Abstract

This paper examines how a district-wide expansion of an advanced learning program reshaped access and short-run academic outcomes. The reform replaced an opt-in identification process with universal screening based on district assessments and expanded program capacity, resulting in larger entering cohorts and a participant pool that more closely reflected the district's student population. Following the reform, the achievement gap between program participants and their non-participating peers narrowed, particularly in math, with variation across entering cohorts closely related to cohort composition. To separate compositional shifts from changes in achievement after enrollment, we re-estimate the model with student fixed effects. These estimates show little evidence of a change in the achievement gap, indicating that compositional shifts account for much of the observed narrowing. These findings suggest that broader access need not come at the expense of participants' academic progress.

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1 Introduction

Gifted and talented (GT) and advanced learning programs play a central role in providing accelerated instruction to high-achieving students in U.S. public schools. Yet longstanding concerns persist about which students gain access to these opportunities. Prior research shows that students from low-income backgrounds, students of color, English learners, and students with disabilities are underrepresented in GT programs (Ford, 1998; Hopkins and Garrett, 2010; Michael-Chadwell, 2011; Peters et al., 2019), patterns not fully explained by differences in academic performance (Grissom and Redding, 2016; Hodges et al., 2018). As a result, districts increasingly face pressure to reconsider how they identify students for these programs.

Much of the existing research and policy discussion on GT program reform focuses on who is identified for services rather than on what happens after access expands. Studies of identification practices show that reliance on parent and teacher referrals, opt-in processes, and discretionary judgments can systematically disadvantage students from historically underrepresented backgrounds (Grissom and Redding, 2016; Peters, 2022). In response, districts have increasingly adopted universal screening approaches designed to reduce procedural barriers to entry. While this literature provides clear evidence that identification reforms can meaningfully alter who enters GT programs, far less is known about how student achievement evolves once access expands.

This paper studies a comprehensive reform of the PEAKS (Parents, Educators and Kids = Success) advanced learning program in a large and diverse Michigan school district. Beginning in the 2023-24 school year, the district replaced a multi-step opt-in identification process with universal screening based on district-wide diagnostic assessments. The reform also expanded program capacity and relocated one elementary site to a more centrally located campus. These changes altered which students entered the program and, in turn, its demographic composition, providing an opportunity to examine how an access-expanding reform reshapes both who is served by a program and the achievement of the students it

serves.

We use student-level administrative data to examine how this policy change affected both access to the program and short-run academic outcomes. First, we document how the reform altered access to the program across schools and student groups within the district. We then examine how the achievement gap between PEAKS and non-PEAKS students evolved following the reform, exploiting differences in exposure across cohorts within the same grade, and assess whether effects vary across newly entering cohorts and school years. Finally, we use student fixed effects to distinguish changes in achievement following the reform from changes associated with the composition of students entering PEAKS.

Results show that the reform substantially broadened access to PEAKS and shifted the composition of entering cohorts, with the largest increase in participation among Black students, whose third-grade entry rate more than tripled following the reform. In terms of academic outcomes, we find that the overall achievement gap between PEAKS and non-PEAKS students narrowed following the reform, particularly in math, capturing the combined consequences of expanded access and students' achievement after entering the program. Moreover, the magnitude of this narrowing varies considerably across newly entering cohorts and corresponds closely to differences in their demographic characteristics and baseline achievement, pointing to an important role for compositional change. We therefore re-estimate the model with student fixed effects, using changes within students over time to separate changes in achievement after enrollment from differences in the students entering PEAKS. These estimates provide little evidence of a change in the achievement gap, indicating that changes in the composition of students entering PEAKS account for most of the narrowing following the reform.

The remainder of the paper proceeds as follows. Section 2 reviews the relevant literature and situates this study within it. Section 3 describes the advanced learning program examined in this paper, the original selection process, and the district's reform. Section 4 introduces the data, and Section 5 documents changes in program access and composition. Section 6

outlines the empirical strategy, Section 7 presents the results on student achievement, and Section 8 concludes.

2 Literature Review and Contributions

A large body of research shows that GT programs enroll disproportionately high shares of students from more advantaged backgrounds relative to the student populations they serve (Ford, 1998; Hopkins and Garrett, 2010; Michael-Chadwell, 2011; Ford, 2014; Peters et al., 2019). Even conditional on achievement, students from low-income backgrounds and students of color are substantially less likely to be identified for GT services (Grissom and Redding, 2016; Hodges et al., 2018), demonstrating that differences in observed academic performance alone cannot account for identification gaps. Instead, research identifies parent and teacher referrals, discretionary judgments, and time- and information-intensive opt-in processes as key contributors to these disparities (Grissom and Redding, 2016; Peters, 2022). In response, professional organizations and policymakers have emphasized the need for reforms that broaden access and reduce reliance on subjective nomination systems (National Association for Gifted Children, 2019).

Accordingly, much of the reform-oriented literature focuses on how students are identified for GT programs rather than on outcomes following changes in identification practices. Research on identification design shows that technical choices—such as whether eligibility is based on composite scores, averaged performance across domains, or multiple pathways that allow qualification based on strength in a single domain—meaningfully shape who is identified. For example, Lakin (2018) demonstrates that commonly used averaging rules can exclude students with strong domain-specific strengths, whereas multiple-criteria rules identify larger and more diverse pools of students. This distinction reflects broader definitions of giftedness that recognize high potential may manifest in specific domains rather than uniformly across subjects (National Association for Gifted Children, 2019). Consistent with this evidence, descriptive case-study findings from Georgia show that adopting multiple-criteria identification rules increased African American representation among newly identified gifted

students (Heath, 2002).

A related issue in identification is the type of assessment used to evaluate students. IQ-based measures have long been central to gifted identification, but their use remains debated, particularly with respect to bias and whether they fully capture students' potential (Pfeiffer, 2012; Hodges et al., 2018). More recently, some districts have incorporated achievement-based measures into their identification processes, though these also have limitations (Hodges et al., 2018). In practice, differences in both identification procedures and the assessments used to evaluate students can shape which students are ultimately identified for advanced learning opportunities.

Beyond identification design, evidence on the academic impacts of GT programs is scarce. Using eligibility cutoffs and lottery-based admissions, Bui et al. (2014) find little evidence of short-run achievement gains for marginally admitted students. In complementary work, Lavy et al. (2026) exploit variation in GT program availability across localities and find limited effects on standardized test scores but meaningful impacts on longer-run educational outcomes, including higher-education choices and field of study. These findings provide little evidence of short-run achievement effects from GT participation, while suggesting that programs may operate through other channels. However, this literature evaluates participation in existing programs rather than the consequences of reforming programs to expand access.

More closely related to the reform studied here, Card and Giuliano (2016) examine the introduction of universal screening for GT identification in a large and diverse Florida school district. Without changing the IQ-based eligibility thresholds, the reform increased the share of students identified as gifted by roughly 45%, with substantially larger gains for students from economically disadvantaged homes (174%), Hispanic students (118%), and Black students (74%). However, the study does not examine academic outcomes following program entry, and more broadly, the achievement consequences of GT program reforms remain largely unexplored.

Understanding these consequences is particularly important because reforms that expand

access can simultaneously change who participates and the conditions under which students are served. Descriptive and policy-oriented studies emphasize concerns about implementation and capacity, especially when staffing and instructional resources do not scale proportionally with enrollment (Swanson, 2007; Kettler et al., 2015). In districts facing budgetary or geographic constraints, increases in cohort size may alter instructional environments without corresponding increases in program inputs. Such changes could affect student achievement as programs expand, making the academic consequences of access-expanding reforms difficult to predict.

Changes in the composition of participating students may also alter the peer environment within advanced learning programs. A large literature shows that peer achievement influences student outcomes (Hoxby, 2000; Hanushek et al., 2003; Zimmerman, 2003; Lavy et al., 2012; Vardardottir, 2013), suggesting that shifts in average peer achievement may affect learning. Broader changes in peer characteristics may also matter, though existing evidence on the magnitude and direction of such effects and whether they differ across dimensions of peer composition is mixed (Van Ewijk and Sleegers, 2010; Lavy and Schlosser, 2011; Sacerdote, 2011; Cho, 2012; Abdulkadiroğlu et al., 2014). Together, these considerations imply that the achievement consequences of expanding access to advanced learning programs are theoretically ambiguous and remain an open empirical question.

As a result, district leaders and policymakers have limited evidence to guide GT program reforms. While districts face growing pressure to broaden access, uncertainty remains about the academic consequences of expanding programs to serve more students from a broader range of backgrounds. Interpreting these changes is complicated by the fact that observed achievement among program participants may reflect both changes in who is served and changes in how participating students perform after enrollment. This paper examines this distinction by evaluating a district-wide reform that substantially expanded access to an advanced learning program. By examining both changes in the composition of participating students and changes in achievement within students over time, we distinguish these two

sources of change in the observed achievement gap. In doing so, the paper extends the GT reform literature beyond questions of identification and participation to show why changes in who gains access are important for interpreting academic outcomes following program expansion.

3 PEAKS Program and Reform

3.1 Original Program Description

Kentwood Public Schools (KPS) is a large suburban district located just south of Grand Rapids, Michigan. Over the past two decades, the district has undergone substantial demographic change, including growth in students of color, English learners, and students from economically disadvantaged backgrounds. As a result, KPS now serves a highly racially, ethnically, and linguistically diverse student population.

PEAKS is KPS' advanced learning program for students in grades 3 through 8. Established more than 25 years ago, PEAKS operates as a full-time, self-contained program in which participating students receive accelerated instruction across core academic subjects, with a particular emphasis on science, technology, engineering, arts, and mathematics (STEAM). The program incorporates computational thinking, collaborative projects, and hands-on learning opportunities intended to promote critical thinking, creativity, and problem solving across content areas. Students also participate in field experiences and culminating project-based learning activities connected to real-world applications. Prior to the selection reform, elementary PEAKS classrooms were housed at Discovery Elementary and Explorer Elementary, two schools located in close proximity in the southeastern portion of the district.

3.2 Original Selection Process

Students are typically selected for PEAKS at the end of second grade and enter the program beginning in third grade, though entry may occur in later grades if seats become available. Prior to the reform, entry relied on a multi-step, opt-in identification process that

required substantial engagement from families and educators. Families were required to complete an application packet that included parent, teacher, and student questionnaires, and students had to take an individually scheduled IQ-based assessment (the Naglieri Nonverbal Ability Test). While PEAKS did not charge tuition, participation in field experiences involved fees, adding a financial consideration alongside the application and assessment requirements, though the district often covered these costs for students with financial need. Access therefore depended not only on student achievement but also on families' awareness of the program and their ability to dedicate the time and resources necessary to complete the identification process and participate in the program.

3.3 Selection Process Reform and Program Expansion

Beginning in the 2023-24 school year, KPS implemented a comprehensive reform of the PEAKS selection process aimed at broadening access and reducing barriers to participation. The district replaced the prior opt-in identification process with universal screening based on the average of students' math and reading i-Ready diagnostic scores from assessments administered to all students. As these assessments are part of the district's existing testing system, additional or outside testing is no longer required. Parents and teachers may also nominate students for consideration, but no application materials or outside testing are required for eligibility. The district also introduced additional translation and interpretation supports intended to improve communication and family engagement for English learner families throughout the PEAKS identification and participation process.

In conjunction with changes to the selection process, the district expanded program capacity and adjusted the geographic placement of elementary PEAKS classrooms. One elementary site was relocated from Discovery Elementary to Glenwood Elementary, a school more centrally located within the district. Although the district had always provided transportation for participating students, the relocation altered proximity and access to PEAKS sites across neighborhoods and schools within the district. At the same time, the size of entering cohorts increased substantially at the third-grade entry point. As shown in Figure

1, third-grade cohorts increased from 51 students prior to the reform to approximately 72 students afterward. Cohorts already enrolled in the program did not grow, so later grades did not expand until the 2023-24 third-grade cohort progressed to each grade. To accommodate the larger cohorts, the district added a third PEAKS teacher and classroom, increasing the number of elementary PEAKS classrooms from two to three while keeping class sizes relatively constant. The additional classroom and teacher then progressed with the expanded cohort into subsequent grades.

These changes altered both how students entered PEAKS and the scale of the program at the elementary level. By expanding entry cohorts and reducing procedural barriers to participation, the reform made PEAKS more accessible to students across a wider set of elementary schools and backgrounds. The PEAKS reform therefore provides an opportunity to examine how expanding access to advanced learning changes who participates and whether the relative academic performance of program participants changes as the program expands.

4 Data

Our analysis uses linked student-level administrative data from KPS covering the 2021–22 through 2025-26 school years. These data include student demographic characteristics, diagnostic assessment outcomes, indicators of PEAKS participation, and school location information.

Demographic variables include student race/ethnicity, gender, grade level, school attended, and indicators for low-income, English learner (EL), and student with disability (SWD) status. Achievement outcomes are drawn from i-Ready math and reading diagnostic assessments administered district-wide in fall, winter, and spring testing windows beginning in the 2022-23 school year. These assessments provide overall scale scores as well as subject-specific domain subscores.

Table 1 presents summary statistics for students observed in grades 3 through 5 during the study period, reported for all students and separately for students ever enrolled in PEAKS and those never enrolled. The table also reports mean fall third-grade i-Ready math and

reading scores, along with their standard deviations.

The district serves a racially, ethnically, and socioeconomically diverse student population. Approximately 33% of students are Black, 18% are Hispanic/Latino, 15% are Asian, and fewer than one-quarter are White. A majority are classified as low income (69%), and sizable shares are identified as EL (31%) or SWD (16%).

Approximately 10% of students in the analytic sample participate in PEAKS at some point during the study period. These students differ substantially from non-PEAKS students along several dimensions. Nearly half of PEAKS students are White, compared with 22% of non-PEAKS students, while PEAKS includes smaller shares of Black students (14% vs. 35%) and Hispanic/Latino students (11% vs. 19%). PEAKS students are also less likely to be classified as low income (42% vs. 72%), SWD (8% vs. 17%), or EL (8% vs. 34%). They also enter third grade with substantially higher achievement: PEAKS students score approximately 78 points higher in reading and 40 points higher in math on fall third-grade i-Ready assessments, equivalent to 1.24 and 1.20 standard deviations, respectively, relative to the district-wide distribution.

5 Composition and Access

5.1 Geographic and School-Level Access

Before turning to student achievement, we first document how the selection reform altered access to PEAKS across the district. Following the reform, one PEAKS site was relocated from Discovery to Glenwood Elementary for newly entering third-grade students, shifting the spatial distribution of sites within the district. Figure 2 illustrates the geographic consequences of this relocation with three maps: the top shows the change in distance from each block group centroid to the nearest PEAKS campus following the relocation, while the middle and bottom maps show median household income and the share of residents who are non-White and non-Asian, respectively, for each block group.

Prior to the change, the two PEAKS sites were situated near one another in the southeast

portion of the district, leaving most elementary schools outside their immediate vicinity. Following the relocation, several schools became substantially closer to a PEAKS campus, though others experienced smaller increases in distance. Although the top map shows a roughly even geographic split in gains and losses, the northeastern portion of the district is sparsely populated, so most students experienced either a reduction or little change in distance. The middle and bottom maps show that the areas now closer to a site are generally lower income and have higher shares of non-White, non-Asian residents, indicating that the relocation shifted proximity toward historically underserved communities.

We next present school-level evidence on these changes in proximity following the relocation. Table 2 reports elementary school characteristics alongside changes in distance and drive time to the nearest PEAKS campus, providing a complementary perspective to the block group analysis above. The table shows that schools that became closer to a PEAKS campus—Glenwood, Meadowlawn, Townline, Southwood, and Bowen—generally serve higher shares of students from economically disadvantaged and historically underrepresented backgrounds than schools near the original PEAKS sites. For example, Glenwood enrolls a particularly large share of Black students (39%), Townline serves a substantial Hispanic/Latino population (31%), Southwood enrolls many ELs (25%), and Meadowlawn has the district's highest share of students from low-income backgrounds (81%). Thus, while the relocation did not reduce distance for all schools, it shifted a PEAKS site toward schools serving comparatively less advantaged student populations.

Changes in the schools from which students entered PEAKS provide complementary evidence of broader school-level participation following the reform. Figure 3 compares the district-wide distribution of second-grade students across elementary schools with the distribution of third-grade PEAKS entrants across sending schools before and after the policy change. Before the reform, entrants came from all schools in the district but were disproportionately drawn from a small subset, with Discovery and Explorer Elementary accounting for 59% of future PEAKS students. Following the reform, their combined share fell to 47%,

although both schools remained overrepresented among PEAKS entrants. At the same time, the shares of entrants from nearly every other elementary school became more closely aligned with those schools' representation in the district-wide second-grade population.[1] These patterns show that PEAKS entrants became more broadly distributed across sending schools following the reform, reflecting the combined changes in site location, identification, and program capacity.

5.2 Student-Level Access and Composition Change

Having documented changes in geographic access, we next assess how participation in PEAKS shifted across demographic groups in third grade. Table 3 reports third-grade PEAKS entry rates before (2022-23) and after (2023-24 through 2025-26) the reform. Entry rates are defined as the share of district third graders with each characteristic who entered PEAKS in each period, while the "Percent Change" column reports the percentage change in entry rates between the pre- and post-reform periods.

Consistent with the explicit expansion in PEAKS capacity, the share of district third graders entering the program increased by 34% following the reform, although the magnitude of this increase varied across demographic groups. Entry rates increased by between 48% and 58% for Asian students, students from low-income homes, and students identifying as two or more races, while the largest increase occurred among Black students, whose entry rate more than tripled from 1.52% to 4.62%. In contrast, White students and ELs experienced smaller increases of 12% and 16%, respectively, and the entry rate for SWDs declined slightly. The expansion therefore increased overall participation while also changing the relative rates at which students from different demographic groups entered PEAKS.

These differences in entry rates mechanically changed the composition of students entering PEAKS. Table 4 reports demographic characteristics and baseline achievement of third-grade students entering PEAKS between 2022-23 and 2025-26, alongside district-wide

[1] Hamilton Elementary reopened in the 2025-26 school year. As students entering PEAKS in third grade are grouped according to the school they attended in second grade, Hamilton is not represented in Figure 3.

third-grade averages over the same period. Prior to the change, entrants were disproportionately White (57% vs. 24% district-wide), while Black students were substantially underrepresented (6% vs. 33%). Following the reform, the share of entrants who were White declined to 46%, while the share who were Black increased to 16%.

Changes along other dimensions were more modest. The shares of ELs and SWDs among entering students remained low, while average fall third-grade i-Ready scores declined by 6 points in both math and reading following the reform. Despite these declines, post-reform entrants continued to score substantially above district averages. Overall, the reform shifted the composition of entering cohorts closer to, though still not fully reflective of, the district population.

6 Methodology

To estimate how the PEAKS selection reform changed the relative achievement of PEAKS students, we exploit differences in exposure to the revised PEAKS program across cohorts. As the reform occurred at a specific point in time, earlier cohorts in a given grade were admitted under the original rules, while later cohorts were admitted under the revised rules. This allows us to compare the achievement gap between PEAKS and non-PEAKS students before and after the reform within the same grade. Since only third-grade entry cohorts expanded, treatment begins at different times across grades: third grade in 2023-24, fourth grade in 2024-25, and fifth grade in 2025-26 as the first expanded cohort progresses through the program.

Our analysis uses a student-level panel of i-Ready assessment records spanning kindergarten through fifth grade. Students contribute all available assessment records observed during the study period, allowing achievement to be tracked over time across multiple grades and testing windows. For most students, the panel includes achievement outcomes from grades prior to PEAKS entry, so the analysis incorporates both pre-PEAKS and post-entry achievement.

Importantly, the empirical objective of this paper is not to estimate the effect of partic-

ipating in PEAKS itself, but rather to estimate how the achievement gap between PEAKS and non-PEAKS students changes following the expansion of the program. Our analysis therefore asks whether the relative achievement of students served by PEAKS changes following the reform, not whether those students would have performed differently had they not participated in PEAKS. A change in this achievement gap may itself arise through two channels: changes in the composition of students entering PEAKS or changes in participating students' achievement after enrollment. We refer to the combination of these two channels as the total change in the PEAKS-non-PEAKS achievement gap. We begin by estimating this total change using the following difference-in-differences specification:

$$\begin{aligned} Y_{isgw} = \beta(\text{PEAKS}_{isg} \times \text{Post}_{sg}) + \theta\text{PEAKS}_{isg} + \delta\text{Post}_{sg} + \\ \mathbf{X}_{isg}\gamma + \delta_s + \delta_g + \delta_w + \epsilon_{isgw} \end{aligned} \tag{1}$$

where Y_{isgw} is an i-Ready achievement outcome for student i, observed in school year s, grade g, and testing window w; PEAKS_{isg} equals one if student i is enrolled in PEAKS in school year s in grade g; Post_{sg} equals one for all students in school year s in grade g, beginning with the school year in which the first cohort admitted under the revised selection system reaches that grade (that is, 2023-24 for grade 3, 2024-25 for grade 4, and 2025-26 for grade 5); and $\mathbf{X}_{isg}$ is a vector of student characteristics (gender, race/ethnicity, low-income, SWD, EL). The model includes school-year, grade, and testing-window fixed effects ($\delta_s, \delta_g, \delta_w$, respectively). Standard errors are two-way clustered by student and teacher.

The coefficient of interest, β, captures the total change in the achievement gap between PEAKS and non-PEAKS students following the reform. A negative estimate indicates that the achievement gap narrows following the reform, while a positive estimate indicates that the gap widens. We first examine how this total change varies across treated cohorts before returning to the distinction between compositional change and changes in student achievement after enrollment.

7 Results

7.1 Total Change in the PEAKS-Non-PEAKS Achievement Gap

We first estimate the total change in the achievement gap between PEAKS and non-PEAKS students following the selection reform, reported in Table 5. As described above, these estimates capture both changes in the composition of students participating in PEAKS and changes in their achievement after enrollment. Outcomes include i-Ready scaled scores in math and reading, along with an indicator for whether a student performs at least one grade level above their enrolled grade ("Above Grade Level"). The table also reports district-wide means for each outcome to provide context for the estimated effect sizes.

Following the reform, the achievement gap between PEAKS and non-PEAKS students narrowed in math, while the estimated changes in reading were smaller and statistically insignificant. In math, the estimated gap in scaled scores narrowed by approximately 6 points, accompanied by a 10.9 percentage point (pp) reduction in the likelihood of PEAKS students performing above grade level relative to their non-PEAKS peers. By contrast, the point estimates for reading were also negative (3.8 scaled score points and 3.9 pp, respectively), although neither estimate was statistically distinguishable from zero.

To assess whether these patterns differ across specific skill areas, Table 6 reports estimates separately by i-Ready domain. In line with the overall results, the achievement gap between PEAKS and non-PEAKS students narrowed across all math domains, with at least one estimate statistically significant in each domain. The largest estimated narrowing occurred in Numbers & Operations, where the estimated gap narrowed by 8.3 scaled-score points and 12.5 pp for performing above grade level. Reading point estimates were likewise negative across domains, although only the scaled score estimate for Comprehension: Literature (5.3 points) was statistically distinguishable from zero.

7.2 Evolution of the Total Achievement Gap

The estimates reported thus far pool treated grades and post-reform school years into a single estimate of the total change in the PEAKS-non-PEAKS achievement gap. We next examine how this change varies across treated grades and school years. To do so, we estimate the following specification separately for each grade:

$$Y_{it} = \alpha + \sum_t \beta_t (PEAKS_i \times Period_t) + \sum_t \delta_t Period_t + \theta PEAKS_i + \mathbf{X_i}\gamma + \epsilon_{it}, \quad (2)$$

where $Period_t$ denotes indicators for each assessment period (e.g., Fall 2022-23 through Spring 2025-26), X_i includes the same student demographic controls used in Equation 1, and the omitted period is the final pre-treatment assessment (spring) for each grade. Consequently, each interaction coefficient ($PEAKS_i \times Period_t$) measures how the adjusted difference in achievement between PEAKS and non-PEAKS students changed relative to the final pre-treatment assessment.

As treatment is introduced sequentially across grades and students are assessed three times during each school year, we present grade-specific estimates rather than a conventional event study corresponding to Equation 1. Such an event study would combine observations from grades with different treatment timings, so that individual event-time coefficients would reflect different combinations of treated grades. Figure 4 displays the resulting estimates, providing a transparent view of how the achievement gap between PEAKS and non-PEAKS students evolves over calendar time within each grade. Each panel reports a grade-by-subject combination, with points representing the estimated achievement gap at each assessment period, vertical bars denoting 95% confidence intervals, and the dashed vertical line indicating the onset of treatment for that grade.

Within school years, some panels also show meaningful changes across assessment windows. For example, the gap generally widens between winter and spring in third-grade math, while narrowing over the course of the school year in fifth-grade reading. More importantly for

the pooled estimates above, the gap differs considerably across treated school years within the same grade. This across-year variation is especially apparent in third-grade reading, where estimates are positive across all three assessment windows for the second treated cohort but consistently negative for the first and third treated cohorts. These patterns indicate that the pooled estimates in Tables 5 and 6 conceal substantial heterogeneity across treated grade-by-school-year combinations. We examine this heterogeneity more directly in the next section.

7.3 Total Effects by Grade and School Year

To do so, we modify the baseline difference-in-differences specification in Equation 1 by replacing the post-reform indicator and its interaction with PEAKS with a series of treated grade-by-school-year indicators and corresponding interactions with PEAKS. All other aspects of the specification remain unchanged. We thus estimate the following model:

$$\begin{aligned} Y_{isgw} = &\sum_{(s,g)\in\mathcal{T}} \beta_{sg}\Big(\text{PEAKS}_{isg} \times \mathbb{1}\{S = s,\ G = g\}\Big) + \sum_{(s,g)\in\mathcal{T}} \lambda_{sg}\mathbb{1}\{S = s,\ G = g\} \\ &+ \theta\,\text{PEAKS}_{isg} + \mathbf{X}_{isg}\gamma + \delta_s + \delta_g + \delta_w + \epsilon_{isgw}, \end{aligned} \tag{3}$$

where $\mathcal{T}$ denotes the set of treated grade-by-school-year cells:

Grade 3: 2023–24, 2024–25, 2025–26

Grade 4: 2024–25, 2025–26

Grade 5: 2025–26

The coefficient β_{sg} captures how the achievement gap between PEAKS and non-PEAKS students changes in each treated grade and school year. Estimating separate effects for each treated grade-by-school-year combination allows us to compare the total change across entering cohorts within the same grade and to follow individual cohorts as they progress through subsequent grades.

Figure 5 visualizes the estimated coefficients for each treated grade-by-school-year com-

bination.[2] Within grades, the magnitude of the estimated effects differs across post-reform years. In math, the estimated third-grade effect is -7.7 points in the first year of the reform (2023-24), -2.3 points in 2024-25, and -11.3 points in 2025-26. Although the 2024-25 estimate is not statistically distinguishable from zero, it is significantly different from the 2025-26 estimate.[3] Similarly, the estimated fourth-grade effect is -8.7 points in 2024-25 but 1.9 points in 2025-26, and the two estimates are likewise statistically different. Across both grades, the estimated change is smaller for the 2024-25 entering cohort than for the other post-reform cohorts observed in the same grade.

A similar pattern emerges in reading. The estimated third-grade effect is modest in 2023-24 (-4.9), becomes positive in 2024-25 (4.2), and drops to a statistically significant -8.2 point estimate in 2025-26. Fourth-grade estimates likewise change sign between 2024-25 and 2025-26, while the fifth-grade estimate is negative and statistically significant (-10.8).

Following individual cohorts across grades provides a different perspective. For the first expanded cohort, the estimated effects remain similar as the cohort progresses from third to fifth grade, ranging from -7.5 to -8.7 points in math and from -4.9 to -10.8 points in reading. Although the math estimate for the second cohort changes sign between third and fourth grade, estimates are otherwise relatively stable as the cohort progresses, albeit over only two post-reform years.

Because the reform also involved opening a new PEAKS site and hiring additional teachers, we assess whether these implementation changes account for the heterogeneity across treated cohorts. We re-estimate the grade-by-school-year model after excluding PEAKS students attending the newly opened site and, separately, those taught by newly hired PEAKS teachers. The estimates in Appendix Tables A.2 and A.3 remain similar to those reported in Appendix Table A.1, providing little evidence that these implementation changes account for the observed differences across cohorts. The systematic differences across entering cohorts

[2]The corresponding coefficient estimates and standard errors are reported in Appendix Table A.1.

[3]Within-grade differences are evaluated using Wald tests of equality between the relevant grade-by-school-year coefficients, based on the estimated variance-covariance matrix from Equation (3).

instead motivate examining whether the students entering PEAKS differed across reform years, which we turn to next.

7.4 Cohort Composition and Within-Student Change

Table 7 reports descriptive characteristics of students entering PEAKS for each third-grade cohort from 2022-23 through 2025-26. The post-reform cohorts differ meaningfully from one another in both demographic composition and baseline achievement. In particular, the 2024-25 entering cohort exhibits the highest baseline achievement, with average fall i-Ready scores that exceed those of the other post-reform cohorts by at least five points in one or both subjects. It also includes the lowest share of students from low-income backgrounds and the highest share of White students, giving it an overall demographic and academic profile that most closely resembles the final pre-reform cohort that entered in 2022-23. These differences are consistent with the pattern of achievement estimates across entering cohorts documented in the preceding section.

The timing of the patterns in Figure 4 is also consistent with differences across entering cohorts playing an important role. In each panel, the estimated PEAKS-non-PEAKS gap in the fall of the first treated school year is smaller than in the preceding fall, indicating that some of the differences associated with the reform are already apparent at the beginning of treated school years. While these descriptive patterns do not by themselves establish that composition accounts for the observed narrowing, they motivate distinguishing changes associated with who enters PEAKS from changes in achievement after enrollment.

To make this distinction more directly, we re-estimate the grade-by-school-year specification with student fixed effects. This specification compares each student to themselves over time, removing time-invariant differences across students. As a result, the estimated change in the achievement gap is not identified by differences in achievement levels across students entering PEAKS. Identification instead comes from within-student changes over time, allowing us to distinguish changes in achievement after enrollment from differences in the students entering PEAKS. Figure 6 compares the resulting estimates with the corresponding estimates

from the specification without student fixed effects.[4]

Once student fixed effects are included, the grade-by-school-year estimates are substantially smaller in magnitude, particularly in math. Across the treated cells, the negative math estimates generally move toward zero, with several becoming positive. Most of the reading estimates also become smaller in magnitude, although the pattern is less pronounced. This attenuation suggests that differences across entering cohorts account for an important share of the variation in estimated changes in the achievement gap across cohorts, raising the question of whether the same pattern holds for the overall reform estimates. Figure 7 therefore compares the overall and domain-specific estimates from Tables 5 and 6 with their student fixed-effects counterparts.

In math, the 6-point narrowing in the overall PEAKS-non-PEAKS achievement gap becomes a statistically insignificant 2.2-point widening once student fixed effects are included. Several domain-specific estimates likewise change sign, with Geometry the only domain exhibiting a statistically significant estimate, changing from -5.7 to 7.7 points. In reading, the overall and domain-specific estimates are generally small and statistically insignificant. Overall, these estimates provide little evidence that the achievement gap changed following the reform after accounting for differences in the students entering PEAKS. The narrowing observed in the baseline estimates therefore appears to reflect primarily changes in the composition of students served by PEAKS. The overall pattern is also similar when i-Ready scores are standardized within grade, school year, and assessment window relative to the corresponding non-PEAKS distribution (see Appendix Tables A.6 and A.7).

8 Conclusion

Persistent underrepresentation in gifted and advanced learning programs has led many districts to reconsider how students are identified for services and how access to advanced instruction is structured (McBee et al., 2016; Siegle et al., 2016; Peters et al., 2019). At the same time, districts frequently face challenges in funding, staffing, and delivering high-quality

[4]See Appendix Table A.4 for coefficient estimates and standard errors.

gifted services at existing participation levels (National Association for Gifted Children, 2019; Hodges, 2025). These constraints raise questions about whether identification reforms and access expansions can be implemented effectively and how student outcomes evolve as programs scale. Yet empirical evidence addressing these tradeoffs has been limited, particularly research that examines what happens after access is expanded.

This study contributes to that discussion by examining a comprehensive reform to the PEAKS advanced learning program in Kentwood Public Schools. The reform combined universal screening based on district assessments with increases in cohort size and changes in the geographic placement of program sites. These changes substantially broadened access to PEAKS, increased participation from previously underrepresented schools and communities, and shifted the composition of entering cohorts closer to district-wide demographics.

The achievement results highlight the importance of distinguishing changes in who participates from changes in how students perform after entering the program. Following the reform, the total achievement gap between PEAKS and non-PEAKS students narrowed, particularly in math. However, the magnitude of this narrowing varied considerably across entering cohorts in ways that corresponded closely to differences in their demographic characteristics and baseline achievement. When we account for these compositional differences using student fixed effects, we find little evidence that the achievement gap changed after enrollment. The narrowing observed following the reform therefore appears to reflect primarily changes in the students served by PEAKS rather than changes in their achievement after enrollment. The district thus substantially broadened access without materially changing how participating students performed after enrollment.

These findings suggest that evaluating access-expanding reforms requires answering two related but distinct questions: who gains access to the program, and how those students perform once enrolled. Because such reforms are explicitly designed to change who participates, shifts in average achievement among program participants may reflect both changes in who is served and changes in students' achievement after enrollment. Distinguishing between

these sources of change is therefore essential for interpreting the academic consequences of expanded access.

For districts considering similar reforms, the PEAKS experience, while specific to a single district, underscores the importance of viewing identification practices, program capacity, and implementation planning as interconnected policy decisions. Expanding access may involve corresponding decisions about staffing, instructional capacity, and geographic accessibility, and implementation remains important to monitor as programs expand. Taken together, the findings suggest that districts can broaden access to advanced learning programs while continuing to serve students effectively.

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Tables

Characteristic	All	PEAKS	Non-PEAKS
Asian	0.15	0.17	0.15
Black	0.33	0.14	0.35
Hispanic/Latino	0.18	0.11	0.19
Two+	0.09	0.11	0.09
White	0.24	0.47	0.22
Female	0.49	0.50	0.49
Low Income	0.69	0.42	0.72
SWD	0.16	0.08	0.17
EL	0.31	0.08	0.34
Reading i-Ready	489.27	559.29	481.51
Standard Deviation	56.43	27.50	53.38
Math i-Ready	417.35	452.85	413.40
Standard Deviation	29.58	17.58	27.97
Students	2,836	283	2,553

Notes: Observations are at the student level, with each student appearing once in the table. Demographic indicators for low-income status, students with disabilities (SWD), and English learner (EL) status equal one if a student is classified in that category in any year during the study period. Reading and math i-Ready scores reported in this table are measured in the fall testing window of students' third-grade year. Standard deviations are reported in the row below each mean.

Table 1: Descriptive Statistics

School	Enrollment	Low Income	Black	White	Hispanic	Asian	Two Plus	English Learner	Special Education	Change in Drive Distance (Miles)	Change in Drive Time (Minutes)
District	4,567	0.69	0.34	0.24	0.18	0.14	0.09	0.18	0.30	–	–
Glenwood	525	0.73	0.39	0.20	0.23	0.10	0.08	0.16	0.30	-2.57	-6.00
Meadowlawn	361	0.81	0.34	0.17	0.19	0.21	0.08	0.15	0.40	-2.35	-4.97
Townline	323	0.79	0.23	0.23	0.31	0.10	0.12	0.22	0.28	-1.66	-3.76
Southwood	343	0.77	0.24	0.36	0.25	0.05	0.11	0.25	0.23	-1.01	-1.17
Bowen	345	0.73	0.36	0.18	0.13	0.26	0.07	0.22	0.39	-0.11	-0.64
Explorer	575	0.51	0.26	0.35	0.14	0.13	0.12	0.19	0.23	0.00	0.00
Hamilton	415	0.71	0.50	0.14	0.17	0.11	0.07	0.15	0.38	0.23	0.18
Brookwood	357	0.72	0.45	0.21	0.13	0.11	0.10	0.21	0.23	0.33	0.71
Challenger	400	0.74	0.47	0.16	0.15	0.12	0.10	0.16	0.28	0.49	3.29
Endeavor	560	0.60	0.34	0.24	0.14	0.20	0.08	0.17	0.34	1.14	2.58
Discovery	674	0.64	0.33	0.26	0.17	0.15	0.09	0.14	0.30	2.57	5.19

Notes: School characteristics are calculated using students enrolled in grades K–5 and are averaged over three academic years spanning the pre- and post-reform periods. Enrollment reflects the average total number of students in grades K–5 over this period. Percentage measures are computed at the school level using the same student population and time window. Drive distance is calculated as the shortest-path travel distance (in miles) and drive time as the shortest-path travel time (in minutes) between each school and the nearest PEAKS campus along the road network.

Table 2: Elementary School Characteristics

	Pre-Reform	Post-Reform	Percent Change
Asian	7.14%	11.29%	58%
Black	1.52%	4.62%	205%
Hispanic/Latino	3.97%	5.93%	49%
Two+	8.70%	13.59%	56%
White	16.96%	19.04%	12%
Female	7.95%	10.36%	30%
Low Income	12.81%	18.91%	48%
SWD	4.72%	4.46%	-6%
EL	1.90%	2.21%	16%
Total	7.50%	10.06%	34%

Notes: This table reports third-grade PEAKS entry rates before (2022-23) and after (2023-24 through 2025-26) the reform. Entry rates are calculated as the share of district third graders with each characteristic who entered PEAKS in each period. The "Percent Change" column reports the percentage change in entry rates between the pre- and post-reform periods.

Table 3: Third-Grade Access to PEAKS

	District	PEAKS	
	Average	**Pre-Reform**	**Reform**
Asian	0.15	0.16	0.17
Black	0.33	0.06	0.16
Hispanic/Latino	0.18	0.10	0.11
Two+	0.09	0.12	0.12
White	0.24	0.57	0.46
Female	0.49	0.51	0.51
Low Income	0.69	0.49	0.41
SWD	0.16	0.12	0.07
EL	0.31	0.08	0.07
Math i-Ready	417	458	452
Reading i-Ready	489	564	558
N	2,834	51	217

Notes: This table reports characteristics of third-grade students entering PEAKS during the year before the reform (2022-23) and the post-reform period (2023-24 through 2025-26), alongside district-wide averages for all third-grade students from 2022-23 to 2025-26. Pre-reform and post-reform columns include only students newly entering PEAKS during each period. Average i-Ready scores are measured in fall of third grade.

Table 4: Descriptive Statistics of Students Entering PEAKS

	Math		Reading	
	Estimate	**Mean**	**Estimate**	**Mean**
Scaled Scores	-6.045**	414	-3.799	473
	(2.792)		(2.559)	
Above Grade Level	-0.109***	0.19	-0.039	0.24
	(0.039)		(0.026)	
N	50,818	50,818	50,929	50,929

Notes: This table reports difference-in-differences estimates of the total change in the achievement gap between PEAKS and non-PEAKS students following the PEAKS selection reform, reflecting a combination of the change in the composition of participating students and any change in achievement after enrollment. Outcomes include i-Ready scaled scores and an indicator for scoring above grade level in math and reading. The Mean column reports district-wide average values for each outcome. All models include student demographic controls and grade, school-year, and testing-window fixed effects. Standard errors are two-way clustered by student and teacher. *p<0.10; **p<0.05; ***p<0.01.

Table 5: Total Effect of the Reform on the PEAKS-Non-PEAKS Achievement Gap

Math			Reading		
Domain	**Scaled Score**	**Above Grade Level**	**Domain**	**Scaled Score**	**Above Grade Level**
Numbers & Operations	-8.256***	-0.125***	Vocabulary	-4.187	-0.029
	(3.015)	(0.033)		(2.754)	(0.029)
Algebra & Algebraic Thinking	-5.934**	-0.058	Comprehension: Overall	-3.472	-0.037
	(2.738)	(0.039)		(3.013)	(0.027)
Measurement & Data	-2.966	-0.067***	Comprehension: Literature	-5.327*	-0.028
	(2.370)	(0.022)		(3.145)	(0.032)
Geometry	-5.699	-0.072*	Comprehension: Informational Text	-1.954	-0.004
	(3.501)	(0.037)		(3.041)	(0.030)
N	50,818	50,818	N	50,929	50,929

Notes: This table reports difference-in-differences estimates of the total change in the achievement gap between PEAKS and non-PEAKS students following the PEAKS selection reform. Outcomes include i-Ready scaled scores and an indicator for scoring above grade level in math and reading, reported separately by i-Ready domain. All models include student demographic controls and grade, school-year, and testing-window fixed effects. Standard errors are two-way clustered by student and teacher. *p<0.10; **p<0.05; ***p<0.01.

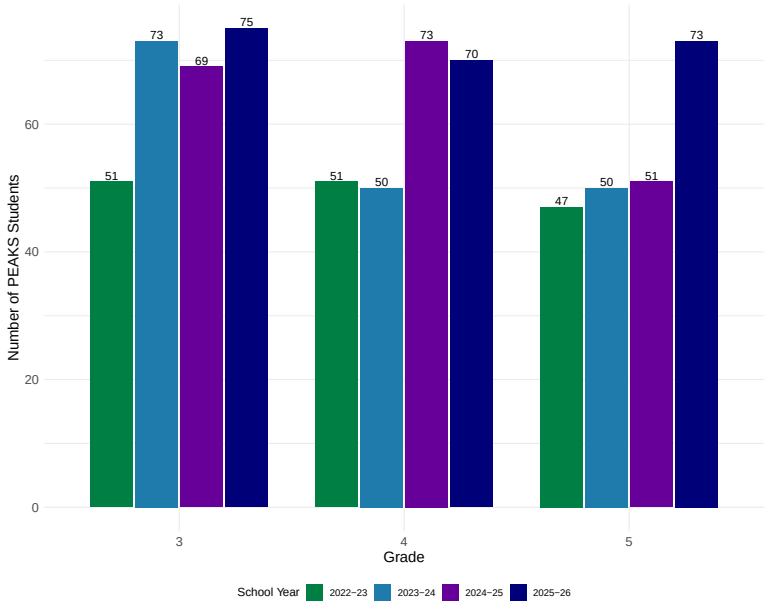
Table 6: Total Effect of the Reform on the PEAKS-Non-PEAKS Achievement Gap, by Domain

	22-23 Cohort	23-24 Cohort	24-25 Cohort	25-26 Cohort
Asian	0.16	0.16	0.16	0.17
Black	0.06	0.19	0.16	0.12
Hispanic/Latino	0.10	0.14	0.10	0.08
Two+	0.12	0.08	0.07	0.19
White	0.57	0.43	0.51	0.44
Female	0.51	0.45	0.49	0.59
Low Income	0.49	0.49	0.33	0.40
SWD	0.12	0.04	0.10	0.07
EL	0.08	0.08	0.03	0.09
Reading i-Ready	564	559	561	553
Math i-Ready	458	451	456	449
Students	51	73	69	75

Notes: This table reports demographic characteristics and baseline fall third-grade i-Ready achievement for students entering PEAKS by cohort. Each column represents a third-grade cohort entering PEAKS between 2022-23 and 2025-26.

Table 7: Characteristics of Third-Grade PEAKS Entering Cohorts

Figures



Notes: This figure shows the number of PEAKS students in each grade and school year.

Figure 1: PEAKS Enrollment by Grade and School Year

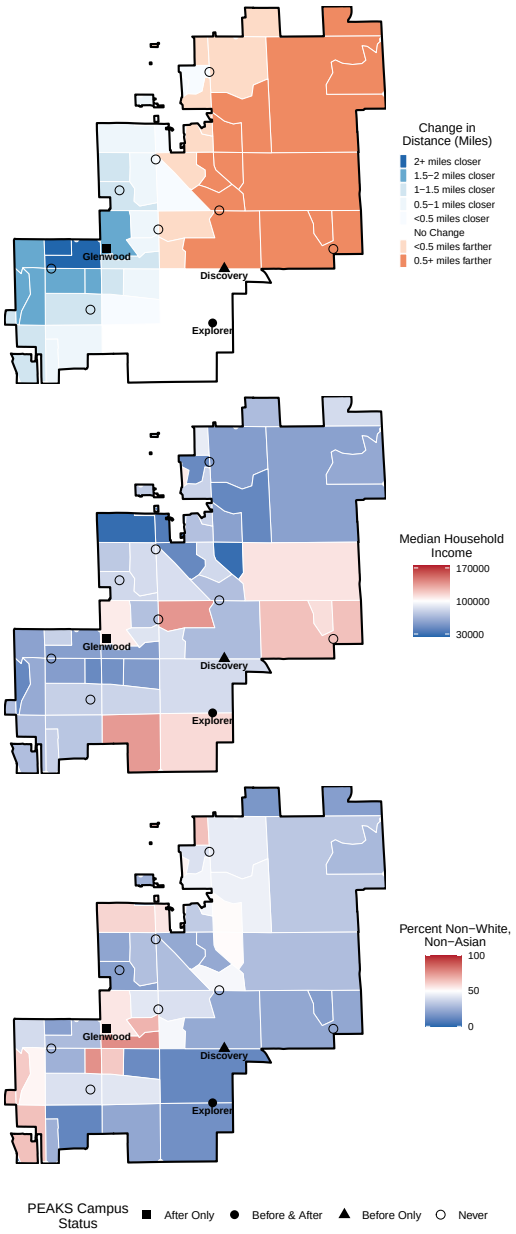
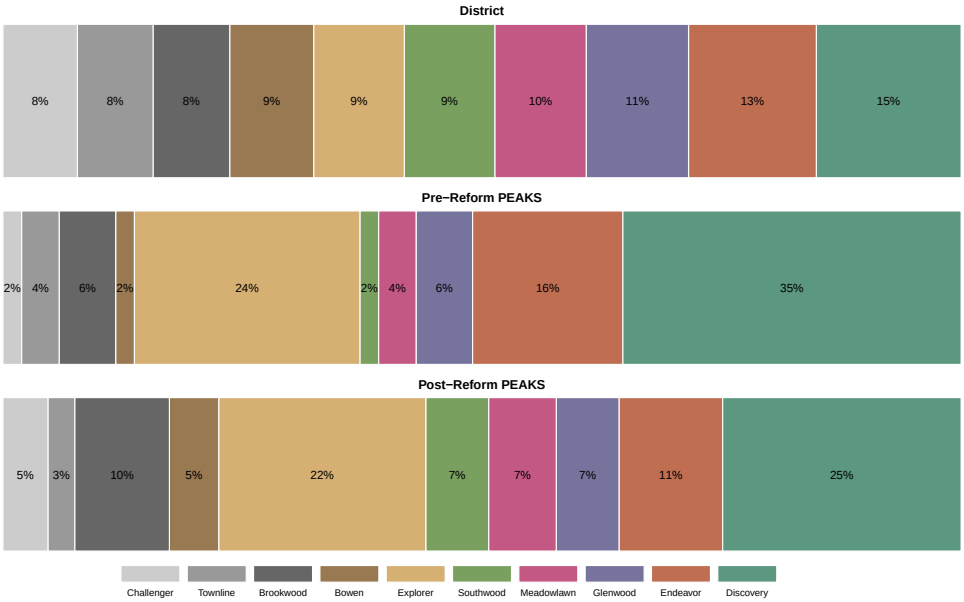


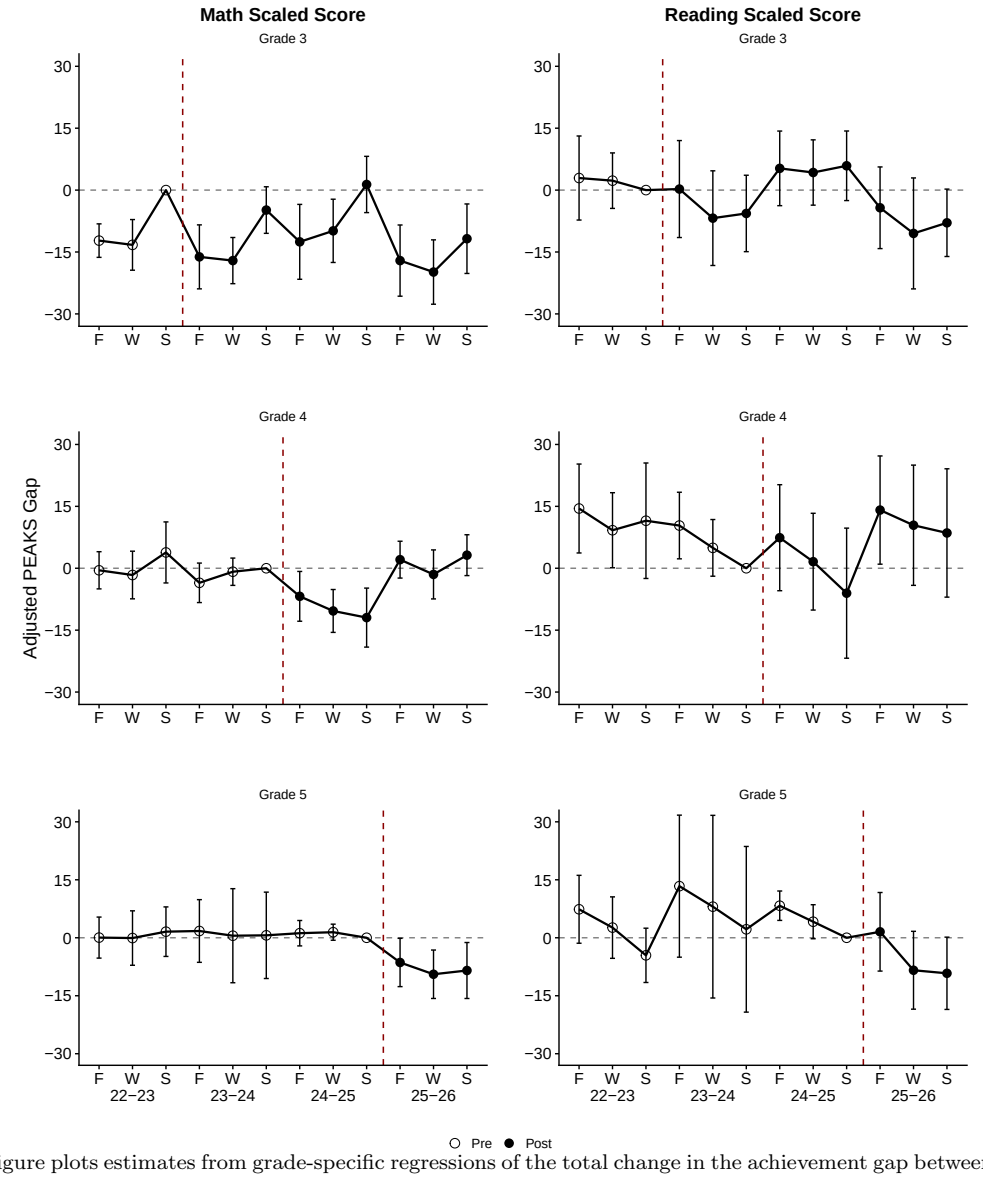
Figure 2: Geographic Placement of PEAKS Sites and Elementary Schools

Notes: The top map shows the change in straight-line distance (measured in miles) from each block group centroid to the nearest PEAKS campus following the relocation. Negative values indicate that a block group is closer to a PEAKS campus after the relocation, while positive values indicate that it is farther away. The middle map shows median household income by block group, and the bottom map shows the percentage of residents who are non-White and non-Asian. The filled square marker denotes the new PEAKS campus ("After Only"). The filled circular marker denotes the school that hosted a PEAKS campus before and after the reform ("Before & After"). The triangular marker denotes the school that hosted a PEAKS site prior to the reform only ("Before Only"). Open circular markers indicate schools that never host a PEAKS site ("Never").



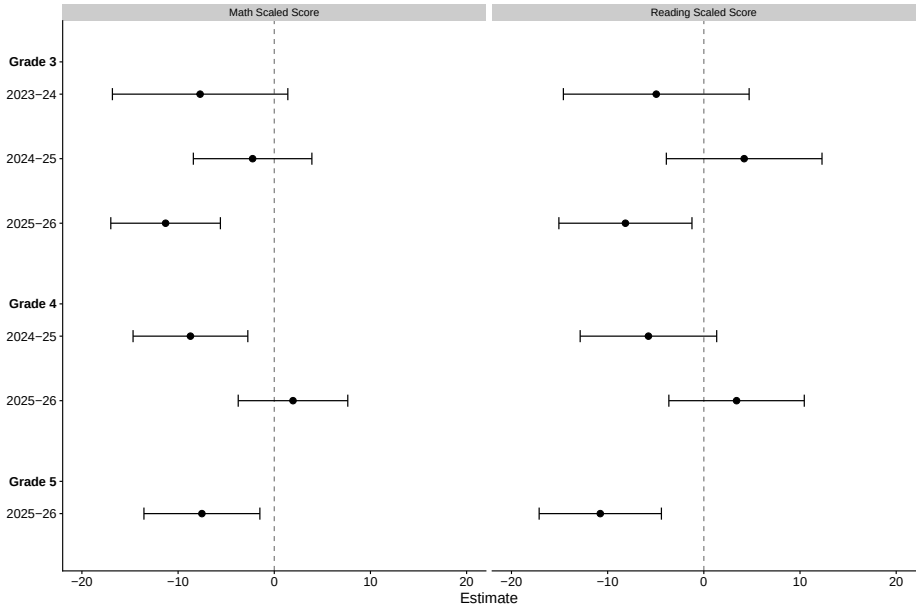
Notes: This figure shows the distribution of second-grade students across elementary schools for the district as a whole and for third-grade students entering PEAKS before the reform (2022-23 cohort) and after the reform (2023-24 through 2025-26 cohorts). The district distribution reflects all second-grade students, while the PEAKS bars reflect the second-grade school attended by third-grade students entering the program in the corresponding year. The post-reform cohort illustrates the broader dispersion of PEAKS entrants across sending schools.

Figure 3: Distribution of Second-Grade Schools for PEAKS Cohorts Before and After the Selection Reform



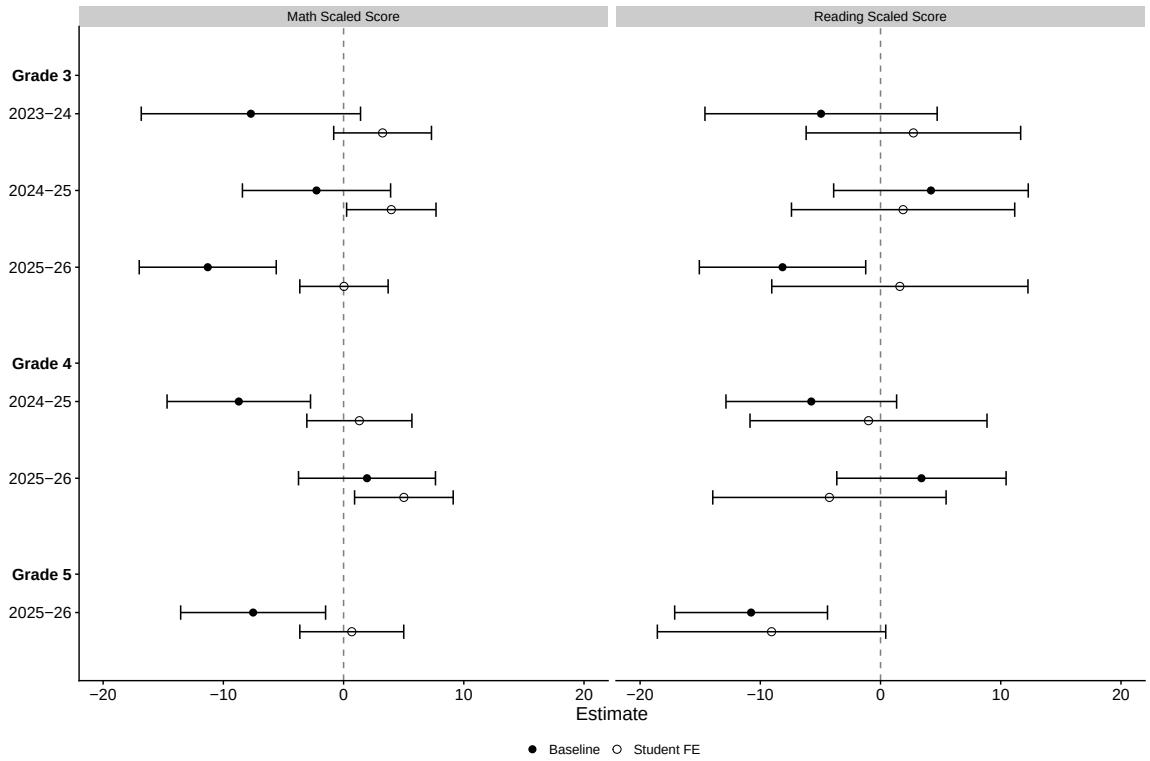
Notes: This figure plots estimates from grade-specific regressions of the total change in the achievement gap between PEAKS and non-PEAKS students over time. Each point represents the estimated PEAKS-non-PEAKS achievement gap at an assessment period relative to the final pre-treatment spring assessment for that grade. Vertical bars denote 95% confidence intervals. All models include the same student demographic controls as Equation 1. Standard errors are two-way clustered by student and teacher.

Figure 4: Evolution of the Total PEAKS-Non-PEAKS Achievement Gap by Grade and Subject



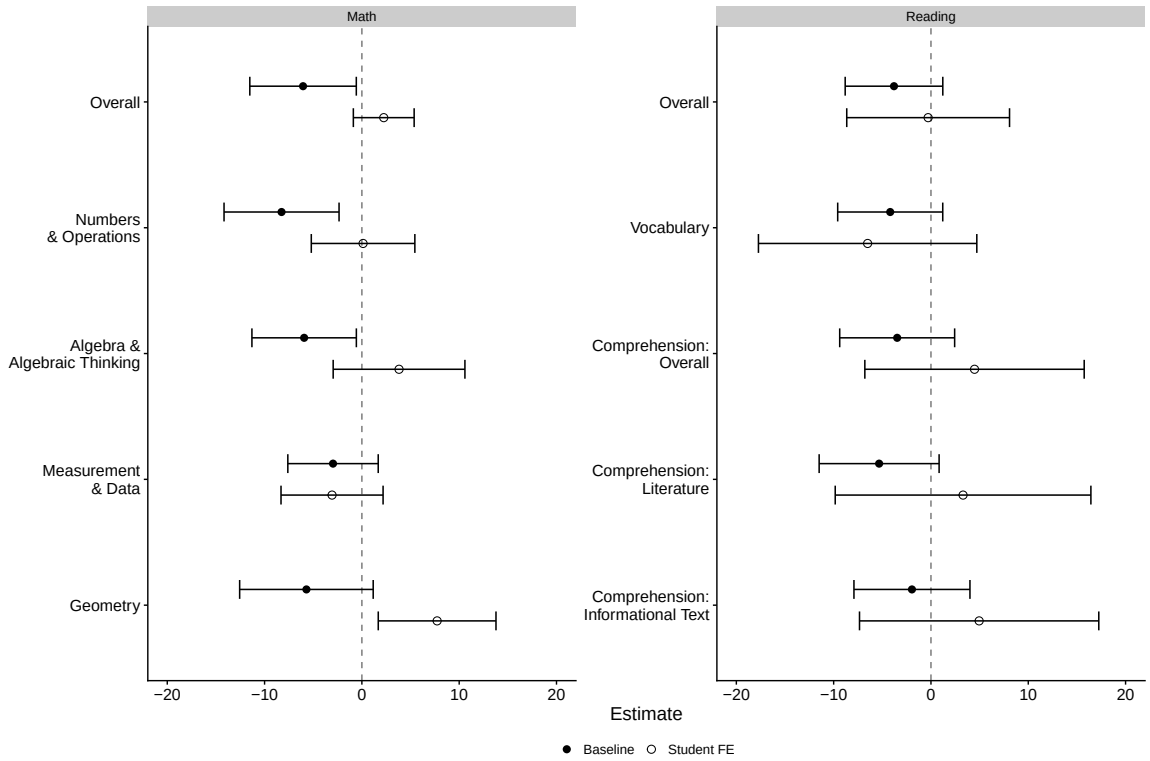
Notes: This figure plots the estimated coefficients from Equation (3) for each treated grade-by-school-year combination. Each point represents the estimated total change in the achievement gap between PEAKS and non-PEAKS students for the corresponding treated grade and school year, with horizontal bars denoting 95% confidence intervals. Outcomes are i-Ready math and reading scaled scores. All models include the same student demographic controls and grade, school-year, and testing-window fixed effects as Equation (1). Standard errors are two-way clustered by student and teacher.

Figure 5: Total Effect on the PEAKS-Non-PEAKS Achievement Gap by Treated Grade and School Year



Notes: This figure compares the estimates reported in Appendix Tables A.1 and A.4 for each treated grade-by-school-year combination. Each point represents the estimated change in the achievement gap between PEAKS and non-PEAKS students for the corresponding treated grade and school year, with horizontal bars denoting 95% confidence intervals. Outcomes are i-Ready math and reading scaled scores. The baseline specification includes student demographic controls and grade, school-year, and testing-window fixed effects. The student fixed-effects specification replaces time-invariant student demographic controls with student fixed effects. Standard errors are two-way clustered by student and teacher.

Figure 6: Total and Within-Student Effects of the Reform on the PEAKS-Non-PEAKS Achievement Gap by Treated Grade and School Year



Notes: This figure compares the estimates reported in Tables 5 and 6 with the corresponding estimates from the student fixed-effects specification. Points represent coefficient estimates and horizontal bars denote 95% confidence intervals. Outcomes are overall and domain-specific i-Ready math and reading scaled scores. The specification reported in Tables 5 and 6 includes student demographic controls and grade, school-year, and testing-window fixed effects. The student fixed-effects specification replaces time-invariant student demographic controls with student fixed effects. Standard errors are two-way clustered by student and teacher.

Figure 7: Total and Within-Student Effects of the Reform on the PEAKS-Non-PEAKS Achievement Gap

Appendix Tables

Outcome	G3 23-24	G3 24-25	G3 25-26	G4 24-25	G4 25-26	G5 25-26
Math Scaled Score	-7.710*	-2.252	-11.299***	-8.716***	1.947	-7.524**
	(4.653)	(3.144)	(2.907)	(3.044)	(2.906)	(3.075)
N	50,818	50,818	50,818	50,818	50,818	50,818
Reading Scaled Score	-4.947	4.194	-8.152**	-5.760	3.403	-10.767***
	(4.927)	(4.129)	(3.530)	(3.621)	(3.592)	(3.243)
N	50,929	50,929	50,929	50,929	50,929	50,929

Notes: This table reports difference-in-differences estimates of the total change in the achievement gap between PEAKS and non-PEAKS students following the PEAKS selection reform. Estimates are reported for each treated grade-by-school-year combination. Outcomes include i-Ready math and reading scaled scores. All models include student demographic controls and grade, school-year, and testing-window fixed effects. Standard errors are two-way clustered by student and teacher. *p<0.10; **p<0.05; ***p<0.01.

Table A.1: Total Effect on the PEAKS-Non-PEAKS Achievement Gap by Treated Grade and School Year

Outcome	G3 23-24	G3 24-25	G3 25-26	G4 24-25	G4 25-26	G5 25-26
Math Scaled Score	-11.591***	-4.850	-12.085***	-10.093**	1.051	-8.075**
	(3.771)	(3.215)	(2.978)	(3.867)	(3.192)	(3.813)
N	50,064	50,064	50,064	50,064	50,064	50,064
Reading Scaled Score	0.390	-0.766	-5.881*	-3.343	-0.463	-9.721**
	(3.901)	(4.063)	(3.210)	(4.295)	(4.042)	(3.967)
N	50,174	50,174	50,174	50,174	50,174	50,174

Notes: This table reports difference-in-differences estimates of the total change in the achievement gap between PEAKS and non-PEAKS students following the PEAKS selection reform after excluding PEAKS students attending the newly opened PEAKS site. Estimates are reported for each treated grade-by-school-year combination. Outcomes include i-Ready math and reading scaled scores. All models include student demographic controls and grade, school-year, and testing-window fixed effects. Standard errors are two-way clustered by student and teacher. *p<0.10; **p<0.05; ***p<0.01.

Table A.2: Total Effect on the PEAKS-Non-PEAKS Achievement Gap Excluding the New PEAKS Site

Outcome	G3 23-24	G3 24-25	G3 25-26	G4 24-25	G4 25-26	G5 25-26
Math Scaled Score	-5.383	-4.370	-10.228***	-8.203***	1.056	-6.562**
	(5.365)	(2.945)	(2.687)	(3.018)	(2.936)	(2.825)
N	50,331	50,331	50,331	50,331	50,331	50,331
Reading Scaled Score	-0.161	1.259	-8.079*	-3.185	-0.421	-9.745***
	(3.262)	(3.678)	(4.280)	(3.382)	(2.404)	(3.009)
N	50,425	50,425	50,425	50,425	50,425	50,425

Notes: This table reports difference-in-differences estimates of the total change in the achievement gap between PEAKS and non-PEAKS students following the PEAKS selection reform after excluding PEAKS students taught by new PEAKS teachers. Estimates are reported for each treated grade-by-school-year combination. Outcomes include i-Ready math and reading scaled scores. All models include student demographic controls and grade, school-year, and testing-window fixed effects. Standard errors are two-way clustered by student and teacher. *p<0.10; **p<0.05; ***p<0.01.

Table A.3: Total Effect on the PEAKS-Non-PEAKS Achievement Gap Excluding New PEAKS Teachers

Outcome	G3 23-24	G3 24-25	G3 25-26	G4 24-25	G4 25-26	G5 25-26
Math Scaled Score	3.244	3.970**	0.033	1.314	5.016**	0.682
	(2.075)	(1.897)	(1.874)	(2.229)	(2.092)	(2.205)
N	50,662	50,662	50,662	50,662	50,662	50,662
Reading Scaled Score	2.733	1.877	1.607	-1.000	-4.251	-9.065*
	(4.552)	(4.737)	(5.436)	(5.029)	(4.951)	(4.846)
N	50,783	50,783	50,783	50,783	50,783	50,783

Notes: This table reports difference-in-differences estimates of the total change in the achievement gap between PEAKS and non-PEAKS students following the PEAKS selection reform, net of changes in the composition of students entering PEAKS. Estimates are reported for each treated grade-by-school-year combination. Outcomes include i-Ready math and reading scaled scores. All models include student demographic controls and grade, school-year, testing-window, and student fixed effects. Standard errors are two-way clustered by student and teacher. *p<0.10; **p<0.05; ***p<0.01.

Table A.4: Within-Student Effects on the PEAKS-Non-PEAKS Achievement Gap by Treated Grade and School Year

Math		**Reading**	
Scaled Score	2.247	Scaled Score	-0.290
	(1.594)		(4.268)
Numbers & Operations	0.123	Vocabulary	-6.509
	(2.715)		(5.725)
Algebra & Algebraic Thinking	3.819	Comprehension: Overall	4.477
	(3.454)		(5.751)
Measurement & Data	-3.066	Comprehension: Literature	3.299
	(2.676)		(6.703)
Geometry	7.733**	Comprehension: Informational Text	4.952
	(3.086)		(6.273)
N	50,662	N	50,783

Notes: This table reports difference-in-differences estimates of how the achievement gap between PEAKS and non-PEAKS students changed following the PEAKS selection reform, net of changes in the composition of students entering PEAKS. Outcomes include i-Ready scaled scores, reported overall and separately by domain. All models include time-varying student demographic controls and grade, school-year, testing-window, and student fixed effects. Standard errors are two-way clustered by student and teacher. *p<0.10; **p<0.05; ***p<0.01.

Table A.5: Within-Student Effects of the Reform on the PEAKS-Non-PEAKS Achievement Gap

	Math		Reading	
	No Student FE	**Student FE**	**No Student FE**	**Student FE**
Standardized Score	-0.087	0.076	0.021	-0.029
	(0.083)	(0.055)	(0.047)	(0.071)
N	50,818	50,662	50,929	50,783

Notes: This table reports difference-in-differences estimates of changes in the achievement gap between PEAKS and non-PEAKS students using standardized i-Ready math and reading scores. Scores are standardized separately by grade, school year, and testing window using the mean and standard deviation among non-PEAKS students. Columns labeled "No Student FE" report estimates from the specification in Equation 1, while columns labeled "Student FE" add student fixed effects and retain time-varying student covariates. Standard errors are two-way clustered by student and teacher. *p<0.10; **p<0.05; ***p<0.01.

Table A.6: Total and Within-Student Effects of the Reform on the PEAKS-Non-PEAKS Achievement Gap, Standardized Scores

Outcome	G3 23-24	G3 24-25	G3 25-26	G4 24-25	G4 25-26	G5 25-26
Standardized Math Score	-0.021	0.075	-0.239***	-0.176*	0.097	-0.241***
	(0.153)	(0.107)	(0.085)	(0.095)	(0.090)	(0.091)
N	50,818	50,818	50,818	50,818	50,818	50,818
Standardized Reading Score	0.065	0.122	-0.035	-0.049	0.134*	-0.100
	(0.087)	(0.084)	(0.067)	(0.069)	(0.069)	(0.064)
N	50,929	50,929	50,929	50,929	50,929	50,929

Notes: This table reports difference-in-differences estimates of the total change in the achievement gap between PEAKS and non-PEAKS students using standardized i-Ready math and reading scores following the PEAKS selection reform. Estimates are reported for each treated grade-by-school-year combination. Outcomes include i-Ready math and reading scaled scores. All models include student demographic controls and grade, school-year, and testing-window fixed effects. Standard errors are two-way clustered by student and teacher. *p<0.10; **p<0.05; ***p<0.01.

Table A.7: Total Effect on the PEAKS-Non-PEAKS Achievement Gap by Treated Grade and School Year, Standardized Scores