

AVID Middle School 2016-2017

DISTRICT FINDINGS: FINAL REPORT



School of Education
UNIVERSITY OF WISCONSIN-MADISON

L139 Education Building, 1000 Bascom Mall, Madison, WI 53706-1326
School of Education, University of Wisconsin-Madison
avid.org | wihopelab.com | wiscap.wisc.edu

For more information, please contact:
Dr. Jed Richardson, Acting Director: (608) 890-2946, jed.richardson@wisc.edu

Authors

Dr. Jed Richardson

Acting Director
Wisconsin HOPE Lab

Grant Sim

Associate Researcher
Wisconsin Evaluation Collaborative

James Gleckner

Assistant Researcher
Wisconsin Evaluation Collaborative

Alison Bowman

Associate Director
Wisconsin HOPE Lab

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Executive Summary

The Madison Metropolitan School District (MMSD) has partnered with the Wisconsin HOPE Lab to conduct an assessment of the Advancement Via Individual Determination (AVID) program in middle schools. AVID is a national college readiness system designed to increase academic achievement, college preparation, postsecondary educational access, and degree attainment for students in the middle academically (i.e. grade point averages between 2.0 and 3.5) who are traditionally underrepresented in higher education. MMSD began operation of the AVID program starting in 2007 and expanded the program to 11 district middle schools in 2012. This 2016-2017 AVID Middle School report presents the results from analyses of measureable student outcomes for the AVID program that reflect the program's stated goals. These analyses focus on AVID Middle School program impacts in two areas—eighth grade academic and engagement outcomes and ninth grade academic and engagement outcomes. Research questions guiding these analyses are as follows:

1. How does the eighth grade academic achievement and engagement of students who participated in the middle school AVID program compare to academically and demographically similar non-AVID peers?
 - a. What have been the program's overall impacts on eighth grade academic achievement and engagement over the past five years?
 - b. What were the program's impacts on eighth grade academic achievement and engagement in 2017?
2. How does the ninth grade academic achievement and engagement of students who participated in the middle school AVID program compare to academically and demographically similar non-AVID peers?
 - a. What have been the program's overall impacts on ninth grade academic achievement and engagement over the past four years?
 - b. Have ninth grade achievement and engagement impacts remained consistent over the past four years?
3. What were the program's impacts on ninth grade academic achievement and engagement in 2017?

Methodology

Estimates of program effects were computed using propensity score matching. This statistical method matches AVID and non-AVID students based on the individual probability of middle school AVID participation using sixth grade pre-participation data. Groups of students were matched within cohort and high school feeder pattern, and balanced within academic, racial, and socioeconomic categories. Rather than comparing selected AVID students to all of their grade-level peers, this technique compared AVID students to other students who had similar academic and demographic profiles but chose not to participate. This matching process occurred on two separate samples—district eighth graders and district ninth graders. Students in the eighth grade sample were drawn from five eighth grade cohorts: 2013, 2014, 2015, 2016, & 2017. Students in the ninth grade sample were drawn from four ninth grade cohorts: 2014, 2015, 2016, & 2017. The eighth grade sample is 72% low-income and 76% students of color. Slightly less than half are male, 41% are English language learners (ELL), and 8% are in special education. The ninth grade student sample is 71% low-income, 76% students of color, and 46% male. Approximately 41% are ELL and 8% are in special education.

Findings

The impacts of the AVID middle school program are broadly similar to those from prior years; however, this 2016-2017 report also added several new outcome measures including an analysis of impacts on student behavior as measured by suspensions. Highlights of impact analyses include:

- The AVID program had modest average impacts on eighth grade academic achievement and engagement, particularly for low-income students and students of color.
- District-wide, AVID students earned cumulative GPAs approximately 0.04 grade points higher than their non-AVID peers. The impact was slightly larger for low-income students and students of color (0.07 grade points higher). Low-income AVID students and AVID students of color also had higher core GPAs than their matched counterparts (0.09 grade points and 0.08 grade points respectively).
- Low-income AVID students had higher attendance rates than similar non-program peers by approximately one percentage point.
- Overall, AVID students had fewer out-of-school suspensions than their counterparts—approximately 0.07 incidents on average. This effect was larger among low-income AVID students (0.09 fewer suspensions) and AVID students of color (0.08 fewer suspensions).
- Participation in AVID during eighth grade has helped students remain on track academically during ninth grade, particularly for low-income students and students of color.
- Overall, students who participated in AVID during eighth grade earned higher cumulative GPAs in the ninth grade than their matched peers by approximately 0.08 grade points. Impacts were larger for low-income AVID students (0.13 grade points higher) and AVID students of color (0.11 grade points higher). Low-income AVID students in eighth grade also earned higher core GPAs in the ninth grade than their counterparts, amounting to just over a tenth of a grade point on average.
- Low-income AVID students had higher attendance rates in ninth grade than non-AVID peers by approximately one percentage point.
- Eighth-grade AVID students also earned more credits in ninth grade (6.56 on average for AVID and 6.24 for the comparison group overall) and failed fewer courses (0.89 on average for AVID and 1.34 for the comparison group overall). Again, for low-income students and students of color, these impacts were somewhat larger.

Introduction

The Madison Metropolitan School District (MMSD) is a large and increasingly diverse urban school district, serving 27,000 students in 48 schools. Nearly half of the students in the district come from low-income families, and over half identify as students of color. Equity is a serious concern in MMSD as the district has grappled for many years with persistent socioeconomic gaps in academic achievement and high school graduation rates. In 2007, as part of an effort to close these achievement gaps, MMSD began to implement the national AVID (Advancement via Individual Determination) system at East High School. In 2008, the district joined forces with the Boys and Girls Club of Dane County (BGCDC) to pair AVID with BG CDC's Teens of Promise (TOPS) program, and the following year the combined AVID/TOPS program was offered in all four of the district's comprehensive high schools. Starting in 2012, the AVID program was expanded to 11 district middle schools, and BG CDC also began implementing the College Club program at selected middle schools that same year.

Since 2014, the Madison Metropolitan School District has partnered with the Wisconsin HOPE Lab at the University of Wisconsin-Madison to conduct an annual assessment of the district's AVID program. The 2016-2017 AVID assessment focuses on estimating AVID Middle School program impacts in two areas— eighth grade academic and engagement outcomes and ninth grade academic and engagement outcomes. Research questions guiding these analyses are as follows:

1. How does the eighth grade academic achievement and engagement of students who participated in the middle school AVID program compare to academically and demographically similar non-AVID peers?
 - a. What have been the program's overall impacts on eighth grade academic achievement and engagement over the past five years?
 - b. What were the program's impacts on eighth grade academic achievement and engagement in 2017?
2. How does the ninth grade academic achievement and engagement of students who participated in the middle school AVID program compare to academically and demographically similar non-AVID peers?
 - a. What have been the program's overall impacts on ninth grade academic achievement and engagement over the past four years?
 - b. Have ninth grade achievement and engagement impacts remained consistent over the past four years?
 - c. What were the program's impacts on ninth grade academic achievement and engagement in 2017?

Overview of AVID

AVID (Advancement Via Individual Determination) is a national comprehensive college readiness system, whose mission is to close the achievement gap by preparing all students for college and success in a global society. At its heart AVID is a shared philosophy between students, educators, families, and community: hold students accountable to the highest standards, provide academic and social support, and they will rise to the challenge.

The AVID College Readiness System is comprised of three, mutually reinforcing key elements. The **AVID**

Elective Class, the first element, is a stand-alone elective course that targets students in the academic middle, with a 2.00 – 3.5 GPA, who have an interest in post-secondary education. Students targeted for AVID are typically students who are capable of completing rigorous curriculum but may need additional support, mentoring and/or information to meet the requirements for enrollment in post-secondary education. Typically, AVID students are the first in their families to attend college, and many are from low-income or minority families. AVID pulls these students out of their unchallenging courses and puts them on the college track: acceleration

instead of remediation. **AVID Schoolwide**, the second element of AVID, transforms the instruction, systems, leadership, and culture of a school, ensuring college readiness for all AVID Elective students and improved academic outcomes for all students. **AVID Professional Development**, the third element, provides educators in all content areas with training and methodologies to create a strong college and career readiness system. Educators leverage these high quality, professional learning opportunities both in their respective roles and in support of the school improvement process and professional development in their schools. MMSD's contract with AVID provides the district with access to AVID Center resources and curriculum to successfully implement the AVID elective course and AVID strategies school-wide.

AVID is schoolwide when a strong AVID system transforms the **Instruction, Systems, Leadership, and Culture** of a school, ensuring college readiness for all AVID Elective students and improved academic performance for all students based on increased opportunities. AVID organizes schoolwide practices into 4 domains: Instruction, Systems, Leadership, and Culture:

1. AVID schoolwide **instruction** occurs when the entire instructional staff utilizes AVID strategies, other best instructional practices, and 21st century tools to ensure college readiness for AVID Elective students and increased academic performance for all students.
2. AVID is schoolwide when **systems** are in place that support governance, curriculum and instruction, data collection and analysis, professional learning, and student and parent outreach, to ensure college readiness for AVID Elective students and improved academic performance for all students.
3. AVID schoolwide **leadership** sets the vision and tone that promote college readiness and high expectations for all students in the school.
4. AVID schoolwide **culture** is evident when the AVID philosophy progressively shifts beliefs and behaviors resulting in an increase of students meeting college readiness requirements.

History of AVID and the Partnership with the Madison Metropolitan School District and Boys and Girls Club of Dane County

The Madison Metropolitan School District (MMSD) piloted the AVID program at East High School in 2007. AVID was implemented in the middle schools in 2012. At that time, MMSD and Boys & Girls Club of Dane County (BGCDC) established AVID/College Club in Cherokee and Wright

middle schools. College Club middle schoolers receive additional supports including after school tutoring, cultural field trips, and family engagement events. In addition, Wright and Cherokee receive additional funding and personnel support from BGCDC.

AVID National Certification

The national AVID Center monitors the implementation of AVID Schoolwide through an extensive certification process, encompassing the four AVID Schoolwide Domains. Schools must show evidence of their implementation – AVID Center recently introduced a new evaluation tool, the AVID Coaching & Certification Instrument (CCI).

The CCI is organized into four sections that correspond to the four AVID Schoolwide Domains: Instruction, Systems, Leadership, and Culture. Use of the CCI helps schools ensure fidelity to the AVID system and plan for sustainable growth. To support the continuous improvement of the school's AVID system, the AVID Site Team is responsible for completing the CCI early in the school year, collecting authentic evidence to document progress, revisiting the CCI regularly to sustain growth, and submitting data to AVID Center in the spring to determine an overall AVID certification rating based on the level of implementation of each Domain.

The new certification ratings are the following:¹

1. AVID Non-Certified Site: At least one of the Domains is rated “Does Not Meet AVID Implementation Expectations.”
2. AVID Certified Site: All Domains are rated “Meets AVID Implementation Expectations” or higher.
3. AVID Emerging Schoolwide Site: Three out of four Domains are rated “Emerging AVID Schoolwide” or higher. If one Domain is rated less than “Emerging AVID Schoolwide,” the rating must be “Meets AVID Implementation Expectations.”
4. AVID Schoolwide Site of Distinction: All Domains are rated “Emerging AVID Schoolwide” or higher.

AVID Implementation

During the 2016-17 school year MMSD offered 28 sections of AVID in grades 7 and 8, serving 587 students (Table 1). Generally, one class per grade was offered in middle school.

In 2016-17, AVID served approximately 16% of MMSD's seventh and eighth grade student population.

Seventy-two percent of AVID middle school students were eligible for free or reduced price lunch (Table 2). While the district is 18% African American and 21% Hispanic, these groups represent 20% and 40% of the AVID population, respectively. Following the national trend, boys (46%) are under-enrolled in AVID.

TABLE 1: 2016-17 MIDDLE SCHOOL AVID ENROLLMENT AND NUMBER OF COURSE SECTIONS

| Grade Level | Enrollment | Sections Per Grade |
|-------------|------------|--------------------|
| 7 | 280 | 14 |
| 8 | 307 | 14 |
| Total | 587 | 28 |

Notes: Table provided by MMSD. Enrollment based on 3rd Friday September counts. Sennett MS offers three AVID elective courses that are multi-age seventh and eighth grade students.

¹ MMSD's will receive its first ratings under the new national certification system in June 2018.

TABLE 2: 2016-17 MIDDLE SCHOOL AVID ENROLLMENT BY STUDENT BACKGROUND CHARACTERISTICS

| | Total | Low-Income | Female | Black | Hispanic | Asian | White | ELL | Special Education |
|--------------------------------|-------|------------|--------|-------|----------|-------|-------|-----|-------------------|
| 7 th Grade District | 280 | 72% | 55% | 19% | 42% | 9% | 17% | 53% | 5% |
| 8 th Grade District | 307 | 73% | 52% | 21% | 39% | 8% | 22% | 42% | 8% |
| District Total | 587 | 72% | 54% | 20% | 40% | 9% | 20% | 47% | 7% |

Source: MMSD.

Program Retention

AVID and wraparound AVID programs (e.g. College Club) seek to retain all students who enroll in the AVID elective class. Students who are struggling academically are identified and closely monitored by a school-based AVID site team. Student attrition from AVID typically occurs through three avenues: (1) they leave the district or transfer to a district school that does not offer AVID programming such as Badger Rock Charter Middle School; (2) they voluntarily drop the AVID elective course, or; (3) they are asked to exit from the program because

their cumulative grade point average drops below 2.0 for more than one semester.

Among AVID seventh graders in 2016-17, 85% enrolled in the program again as eighth graders for the 2017-18 academic year. Overall retention in the AVID program, as students made the transition from middle school to high school, was considerably lower (55%) due to fewer AVID seats at the ninth grade level.

Study Methodology

We estimated the effects of middle school AVID participation using propensity score matching. This statistical method allowed AVID students to be compared with other students who had similar academic and demographic profiles but who did not participate in the program--a more “apples to apples” comparison. Our approach matched students based on the individual probability of middle school AVID participation computed for each student within each MMSD high school feeder pattern (Table 3).² Because we used multiple cohort years in our analyses, we performed this matching process separately for each cohort to ensure that AVID students and their matched non-AVID counterparts were exposed to the same school environments (e.g. school policies, leadership & peers) which might otherwise bias our estimates. Matching within cohort also enabled us to compare program effect estimates on ninth grade outcomes across cohorts.

TABLE 3: MMSD HIGH SCHOOL FEEDER SCHOOLS

| High School | Middle Schools |
|-------------|--|
| East | Blackhawk; O'Keefe; Sherman |
| La Follette | Badger Rock Charter; Sennett; Whitehorse |
| Memorial | Jefferson; Spring Harbor; Toki |
| West | Cherokee; Hamilton; Wright |

To maximize the overall quality of the matching process, we allowed AVID students to be matched with more

than one similar non-AVID comparison student. All final estimates were weighted to adjust for the number of matched partners. Pairing was based on the probability of AVID program participation as calculated from the student's sixth grade pre-program characteristics. These baseline characteristics were derived from district administrative records, and included student demographics (e.g. gender, race/ethnicity, low-income status, parent education,³ English language learner status, special education status), academic and behavioral records, attendance, and WKCE and Badger Exam Reading and Math scores.⁴ In cases where particular baseline information for a given student was missing, we substituted predicted (imputed) values based on other observed characteristics.⁵ This allowed us to keep these students in our analyses rather than drop them and risk biasing our results.

We conducted this matching process on two separate samples—district eighth graders and district ninth graders. Students in our eighth grade sample were drawn from five eighth grade cohorts: 2013, 2014, 2015, 2016, & 2017.⁶ Students in our ninth grade sample were drawn from four ninth grade cohorts: 2014, 2015, 2016, & 2017. We used the matched eighth grade sample to estimate the impacts of AVID middle school participation on the focal eighth grade outcomes of cumulative and core⁷ GPA, attendance, suspensions, algebra course enrollment, and spring MAP Reading and Math scores. With the matched ninth grade sample we examined how participation in middle school AVID impacted ninth grade outcomes once students made the transition to high

² Due to the relatively small number of traditionally underserved students targeted by the AVID program at some district middle schools, matches could only be conducted within feeder patterns, and not within individual schools.

³ In 2015-16, we began including parent education in our matching process. Although the relationship between parent education and school outcomes is well established in the research literature, missing data previously prevented the use of parent education for matching. However, recent published guidance on dealing with missing values in propensity score matching allowed us to account for the influence of parent education in all of our impact estimates while also accounting for missing values. For more information see: http://link.springer.com/chapter/10.1007/978-3-319-41259-7_5.

⁴ We use sixth grade WKCE and Badger Exam scores instead of MAP scores for matching due to their availability for all cohorts used in our analyses.

⁵ Approximately 10% of the students in our samples had missing values for parent education. We used the technique of multiple imputation to handle these missing values in both the matching and analysis.

⁶ Students in the 2013 cohort were enrolled for the 2012/13 academic year. Each cohort year we reference follows this same pattern.

⁷ Core classes include math, science, language arts and social studies.

school. We estimated the impacts of middle school AVID participation on the outcomes of ninth grade cumulative and core GPA, attendance, suspensions, geometry course enrollment, and credit accumulation as represented by the average number of earned credits and failed courses in the ninth grade. Throughout the report we note significant program impacts using a 95% confidence level ($\alpha=.05$) unless specifically stated otherwise.

Like all non-experimental studies relying on observational data, the present study is subject to certain limitations.

Most notably, AVID and non-AVID students could only be matched on the pre-program characteristics present in district administrative records. While these records allowed us to “control” for a comprehensive array of academic and demographic pre-program information that would otherwise bias estimates of program impact, remaining bias from other preexisting, but unobserved, factors is still possible. The analysis therefore bears this risk in absence of better strategies for estimating program effects.

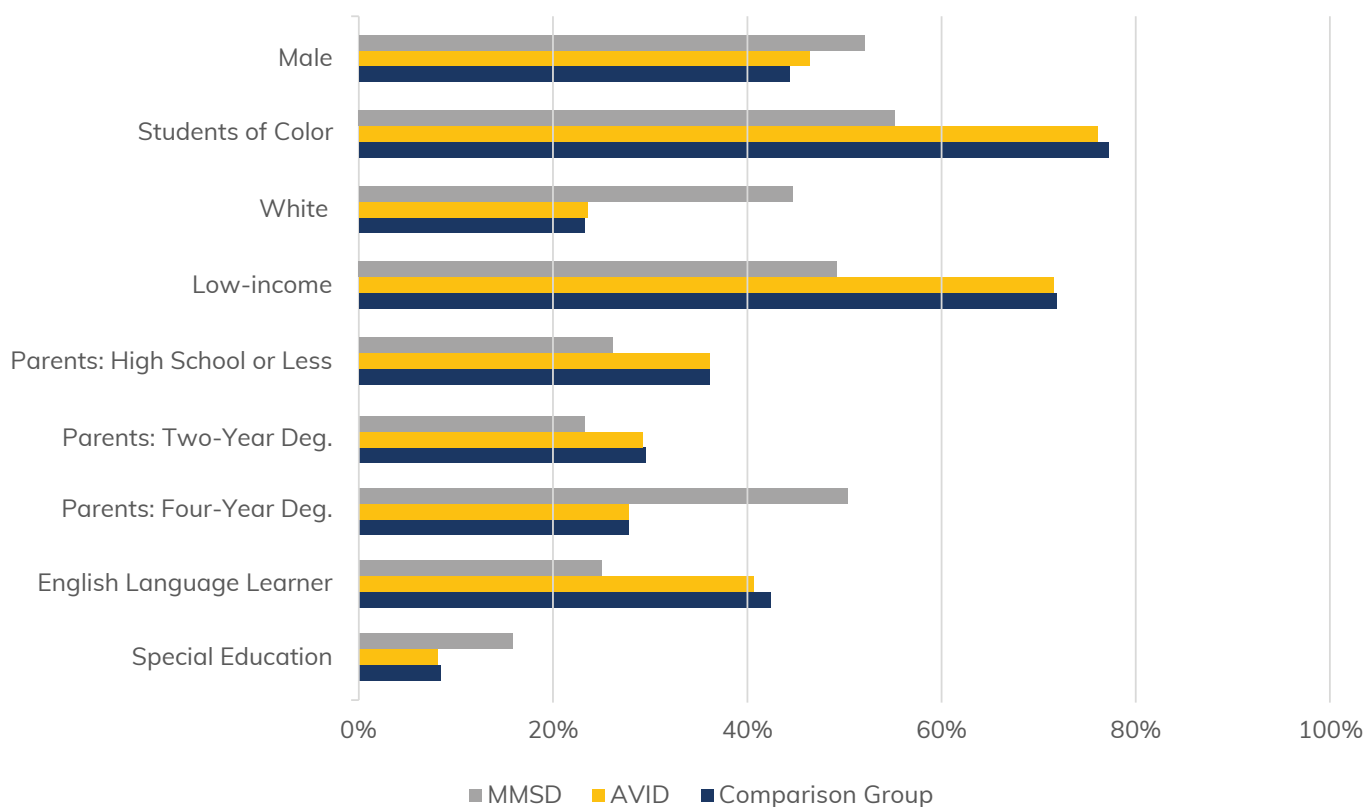
AVID Eighth-Grade Impacts

Eighth-Grade Sample

The statistical matching process for the combined cohort eighth grade sample resulted in a matched comparison group of non-AVID students who closely resembled their AVID counterparts on sixth grade characteristics. Figure

1 presents the demographic makeup of the two groups, as well as the demographic profile of the full district for comparison. Among both AVID students and their matched comparison group peers, students of color made up three-quarters of the sample. Low-income students represented nearly three-fourths of the matched sample. Slightly less

FIGURE 1: DEMOGRAPHIC CHARACTERISTICS OF EIGHTH GRADE SAMPLE



than half of AVID and comparison group students were male, while over 40% were English language learners. Students in the matched sample most commonly had parents who had never attended college. However, just over a quarter had parents who had earned a four-year college degree or higher.

Table 4 shows that AVID students and their comparison group counterparts had nearly identical academic histories at the start of middle school. This was true in terms of their sixth grade GPA, as well as their sixth

grade WKCE and Badger Exam Reading and Math scores. As determined by AVID selection, students in the matched eighth grade sample came from the academic middle, with an average GPA of around 3.0 as sixth graders. All baseline measures presented in Figure 1 and Table 4 were statistically equivalent between AVID students and their comparison group peers.⁸ Nevertheless, we make statistical adjustments for any residual imbalance between the two groups in all of our impact estimates.⁹

TABLE 4: ACADEMIC CHARACTERISTICS OF THE EIGHTH GRADE SAMPLE

| | MMSD | AVID | Comparison Group |
|----------------------------------|---------|---------|------------------|
| Sixth Grade Cumulative GPA | 3.09 | 3.01 | 3.00 |
| Sixth Grade Core GPA | 2.98 | 2.86 | 2.87 |
| Sixth Grade Attendance Rate | 95% | 96% | 96% |
| Sixth Grade Behavior Events | 1.92 | 0.87 | 0.83 |
| Sixth Grade WKCE Math Score | 512.29 | 500.39 | 499.74 |
| Sixth Grade WKCE Reading Score | 497.93 | 489.41 | 488.94 |
| Sixth Grade Badger Math Score | 2509.16 | 2479.58 | 2481.53 |
| Sixth Grade Badger Reading Score | 2507.91 | 2477.89 | 2480.78 |

⁸ Throughout the report, statements of statistical significance are based on a 95% confidence level, with $\alpha=.05$.

⁹ Impact estimates are derived from regression models, which control for any residual imbalance in baseline characteristics between AVID and comparison group students.

Eighth-Grade Impacts: Combined Cohort (2013-2017)

Impact estimates in this section are based on analyses combining five eighth grade cohorts: 2013-2017. They thus represent the average impacts of AVID participation over that five-year period. **Our evaluation of the middle school AVID program indicates that it has had significant positive average effects on academic achievement. We also found significant positive average effects on**

out-of-school suspensions. In both cases, however, effects were generally modest. We did not find any effects of the program on standardized test performance as measured by eighth-grade MAP scores, nor any effects at the district level on eighth grade attendance and algebra course enrollment. We detail each of these findings below.

Legend



AVID



COMPARISON GROUP



DIFFERENCE IS
STATISTICALLY
SIGNIFICANT
AT THE 90%
LEVEL



DIFFERENCE IS
STATISTICALLY
SIGNIFICANT
AT THE 95%
LEVEL

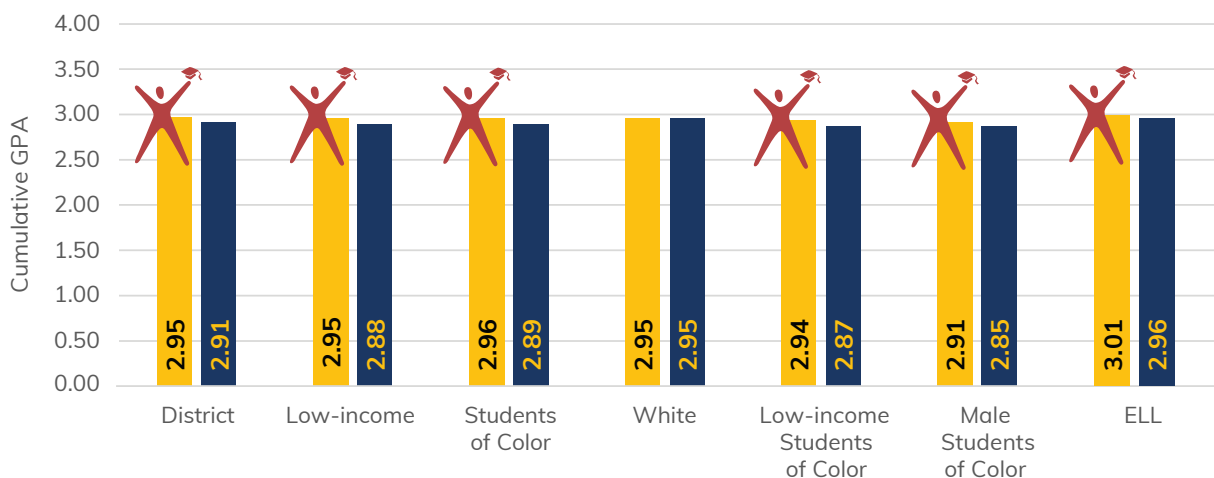
Impact: Eighth-Grade Grade Point Average

There is evidence of positive, though modest, average program impacts on eighth grade academic performance. AVID students earned higher cumulative and core GPAs than their non-AVID peers. This was true both at the district level and across focal subgroups (Figures 2 & 3). Differences in cumulative GPA were generally statistically significant, with the exception

of the White student subgroup. Differences in core GPA were statistically significant for the low income, students of color, and low-income students of color subgroups, and only marginally non-significant at the district level.

Key Finding:
AVID students
earned higher
cumulative and
core eighth
grade GPAs
than their
peers.

FIGURE 2: EIGHTH-GRADE CUMULATIVE GPA BY AVID PARTICIPATION



Legend



AVID



COMPARISON
GROUP

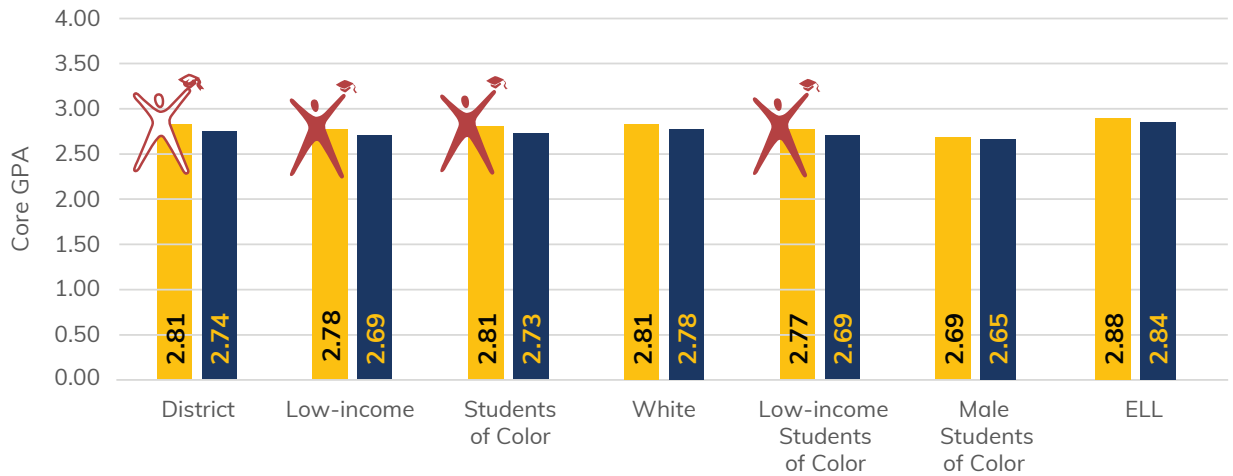


DIFFERENCE IS
STATISTICALLY
SIGNIFICANT
AT THE 90%
LEVEL



DIFFERENCE IS
STATISTICALLY
SIGNIFICANT
AT THE 95%
LEVEL

FIGURE 3: EIGHTH-GRADE CORE GPA BY AVID PARTICIPATION



Legend



AVID

COMPARISON
GROUPDIFFERENCE IS
STATISTICALLY
SIGNIFICANT
AT THE 90%
LEVELDIFFERENCE IS
STATISTICALLY
SIGNIFICANT
AT THE 95%
LEVEL

Impact: Eighth-Grade Attendance

There is evidence that AVID participation reduced the number of unexcused absent days in eighth grade for male students of color and increased the general attendance of low-income participants. Male students of color were the only AVID eighth grade subgroup that had significantly fewer unexcused absent days than their comparison group peers (Figure 4). Attendance rates for AVID students were higher, but not statistically significantly higher, than their comparison group counterparts at

the district level and among most focal subgroups. Low-income AVID eighth graders, however, did have significantly higher attendance than their comparison group peers (Figure 5).

Key Finding: Male AVID students of color had significantly fewer unexcused absent days in eighth grade than their peers. Low-income AVID students had significantly higher eighth grade attendance rates than their peers.

FIGURE 4: EIGHTH-GRADE UNEXCUSED DAYS ABSENT BY AVID PARTICIPATION

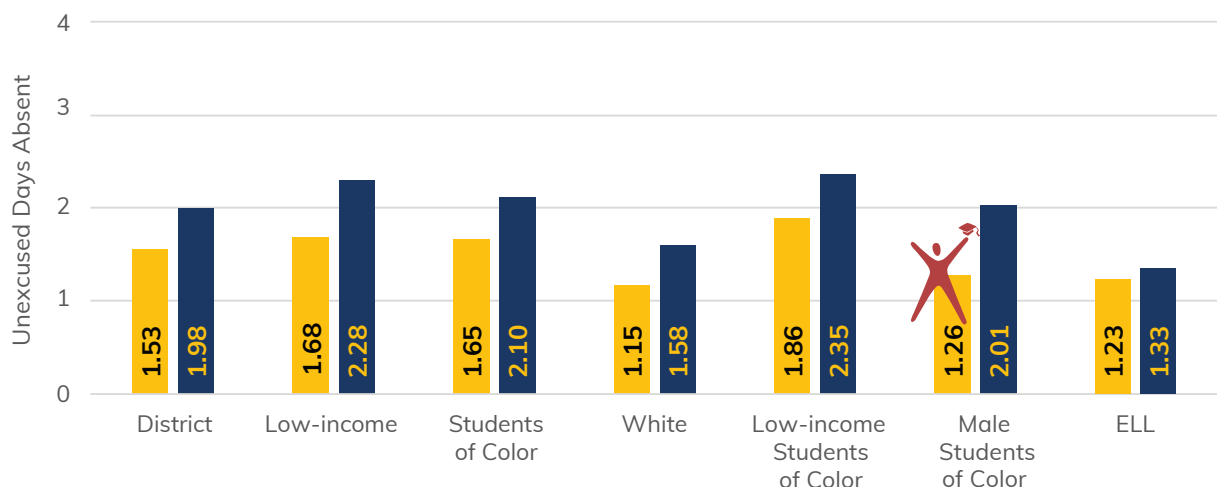
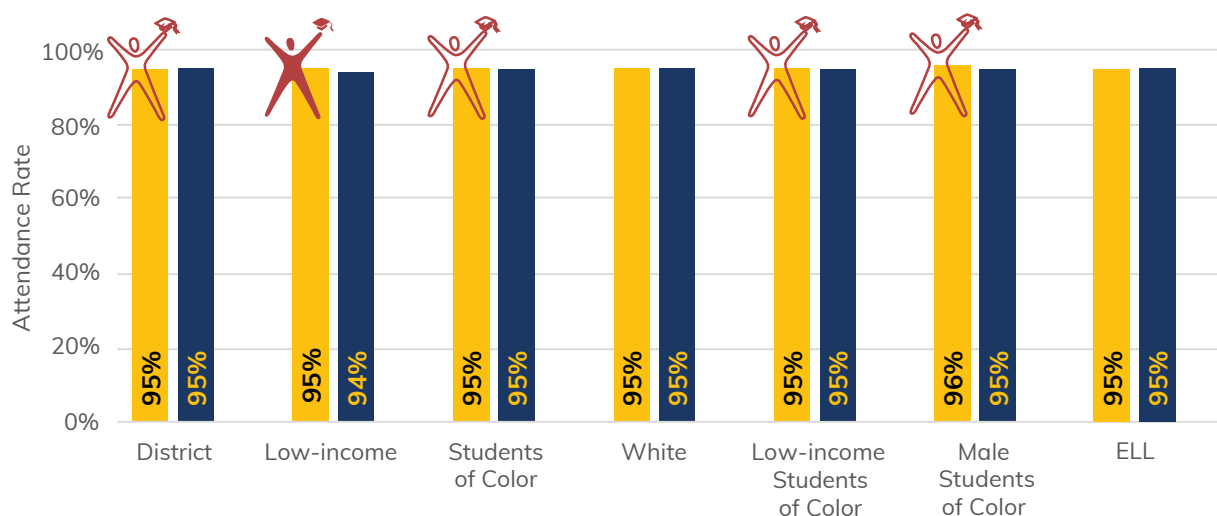


FIGURE 5: EIGHTH-GRADE ATTENDANCE BY AVID PARTICIPATION



Legend



AVID

COMPARISON
GROUPDIFFERENCE IS
STATISTICALLY
SIGNIFICANT
AT THE 90%
LEVELDIFFERENCE IS
STATISTICALLY
SIGNIFICANT
AT THE 95%
LEVEL

Impact: Eighth-Grade Suspensions

There is evidence that AVID participation reduced the number of out-of-school suspensions among eighth grade participants.

We did not find evidence of significantly fewer in-school-suspensions in eighth grade, on average, for AVID students (Figure 6). However, at the district level and across most focal subgroups, AVID eighth graders had significantly fewer out-of-school suspensions than their comparison group peers (Figure 7). Additionally,

we found some evidence that AVID participation reduced the number of out-of-school suspension days at the district level and for low-income students, although these differences did not achieve statistical significance (Figure 8).

Key Finding: AVID students received fewer out-of-school suspensions in the eighth grade than their peers.

FIGURE 6: EIGHTH-GRADE IN-SCHOOL SUSPENSIONS BY AVID PARTICIPATION

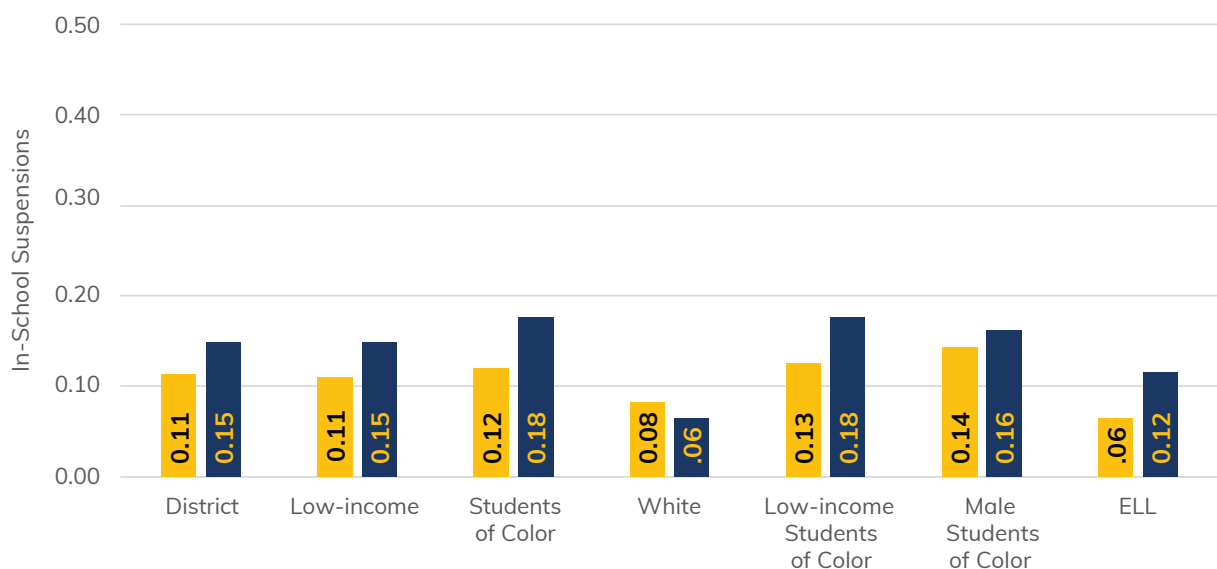
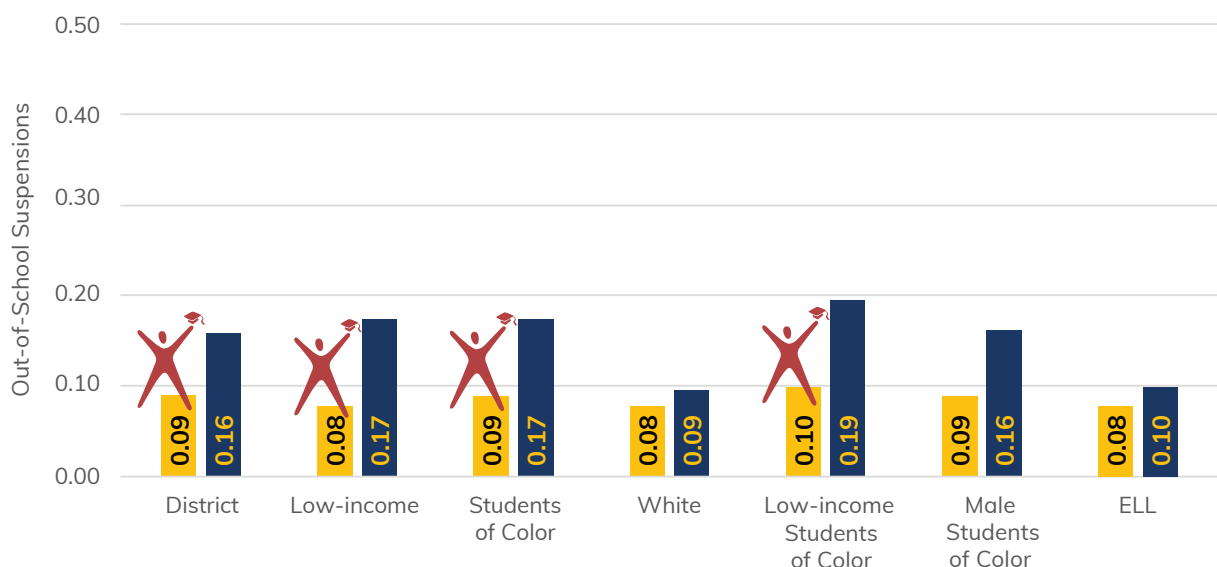


FIGURE 7: EIGHTH-GRADE OUT-OF-SCHOOL SUSPENSIONS BY AVID PARTICIPATION



Legend



AVID



COMPARISON
GROUP

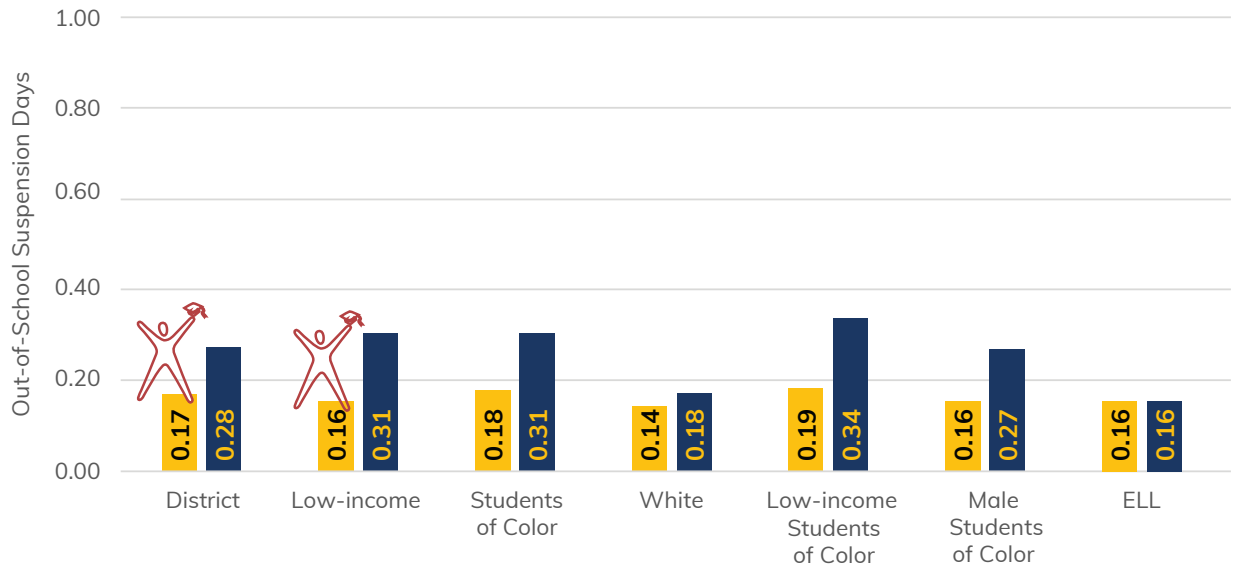


DIFFERENCE IS
STATISTICALLY
SIGNIFICANT
AT THE 90%
LEVEL



DIFFERENCE IS
STATISTICALLY
SIGNIFICANT
AT THE 95%
LEVEL

FIGURE 8: EIGHTH-GRADE OUT-OF-SCHOOL SUSPENSION DAYS BY AVID PARTICIPATION



Legend



AVID

COMPARISON
GROUPDIFFERENCE IS
STATISTICALLY
SIGNIFICANT
AT THE 90%
LEVELDIFFERENCE IS
STATISTICALLY
SIGNIFICANT
AT THE 95%
LEVEL

Impact: Eighth-Grade MAP Test Scores

We did not find evidence of average AVID effects on eighth grade MAP test performance. At the district level and across most subgroups, AVID students earned higher, but statistically indistinguishable scores in relation

to their comparison group peers on the MAP math and reading tests (Figures 9 & 10). White AVID participants, however, scored about 2.3 points lower on the MAP reading test on average than their matched peers—a significant difference between the two groups.

FIGURE 9: EIGHTH-GRADE MAP MATH SCORES BY AVID PARTICIPATION

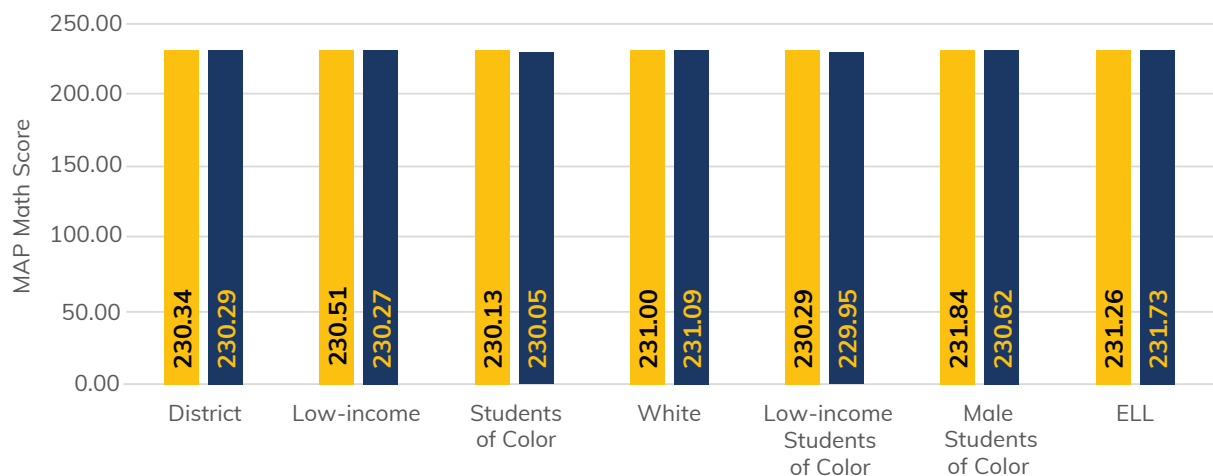
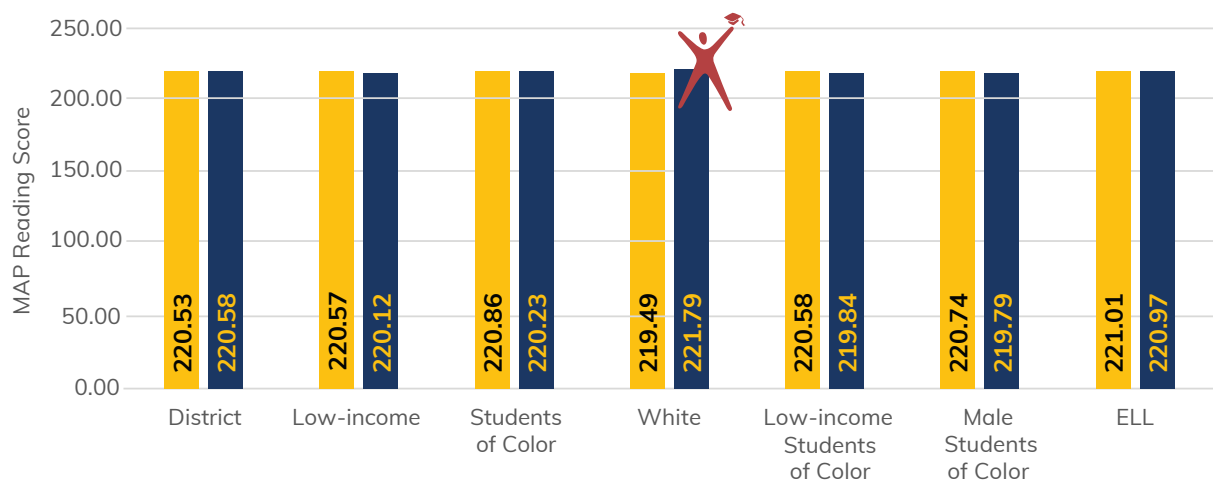


FIGURE 10: EIGHTH-GRADE MAP READING SCORES BY AVID PARTICIPATION



Legend



AVID

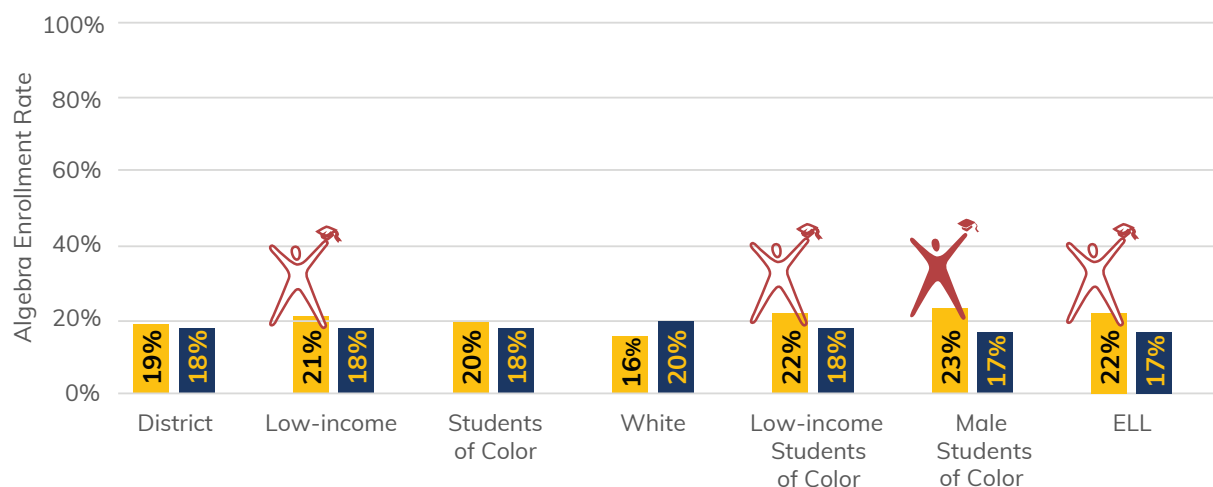
COMPARISON
GROUPDIFFERENCE IS
STATISTICALLY
SIGNIFICANT
AT THE 90%
LEVELDIFFERENCE IS
STATISTICALLY
SIGNIFICANT
AT THE 95%
LEVEL

Impact: Eighth-Grade Algebra Course Enrollment

We found no evidence of AVID effects on average algebra enrollment rates at the district level but found evidence that male AVID participants of color enrolled in algebra

in eighth grade at a significantly higher rate (6 percentage points) than their non-AVID peers. Although AVID participants enrolled in eighth grade algebra at slightly higher rates than their peers district-wide and among most subgroups, these differences did not achieve statistical significance (Figure 11).¹⁰

FIGURE 11: EIGHTH-GRADE ALGEBRA ENROLLMENT BY AVID PARTICIPATION



¹⁰ AVID participant and comparison groups are limited to students who were in the regular math sequence in sixth grade. This excludes students who took seventh grade math, eighth grade math, or any high school level math courses in sixth grade.

Eighth-Grade Impacts: 2017 Cohort

While the previous section presented average AVID impacts over the five-year period of 2013 to 2017, here we present a more fine-grained picture of impacts for the 2017 cohort alone. This picture includes impacts at the district level, as well as within demographic subgroups and high school feeder patterns. **Our evaluation of the 2017 eighth grade AVID cohort**

indicates that the program had generally positive, but few statistically significant effects on eighth grade behavior and academic performance as measured by GPA, attendance, MAP test scores, algebra course enrollment, and suspensions. This was true both at the district level, and within key demographic subgroups. We detail our findings from the 2017 cohort below.

Legend



AVID



COMPARISON GROUP



DIFFERENCE IS
STATISTICALLY
SIGNIFICANT
AT THE 90%
LEVEL



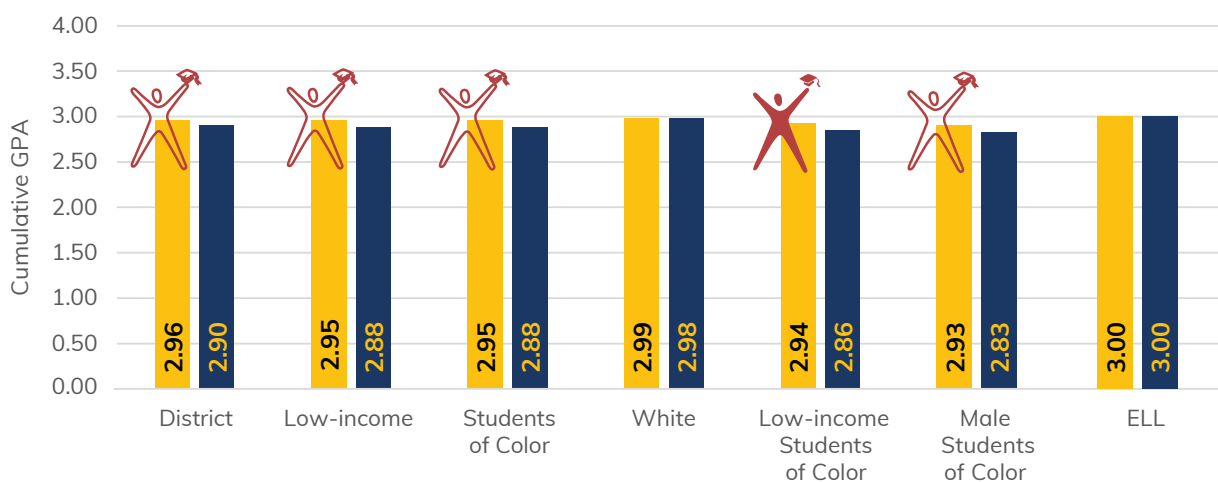
DIFFERENCE IS
STATISTICALLY
SIGNIFICANT
AT THE 95%
LEVEL

Impact: Eighth-Grade Grade Point Average (2017)

There is some limited evidence that AVID participation increased eighth-grade academic performance in 2017. At the district level and across most focal subgroups, AVID eighth graders

had higher cumulative and core GPAs than their comparison group peers (Figures 12 & 13). However, most of these differences were not large enough to achieve statistical significance. Low-income students of color who participated in AVID, though, did earn significantly higher cumulative GPAs than their non-AVID peers.

FIGURE 12: 2017 EIGHTH GRADE CUMULATIVE GPA BY AVID PARTICIPATION



Legend



AVID



COMPARISON
GROUP

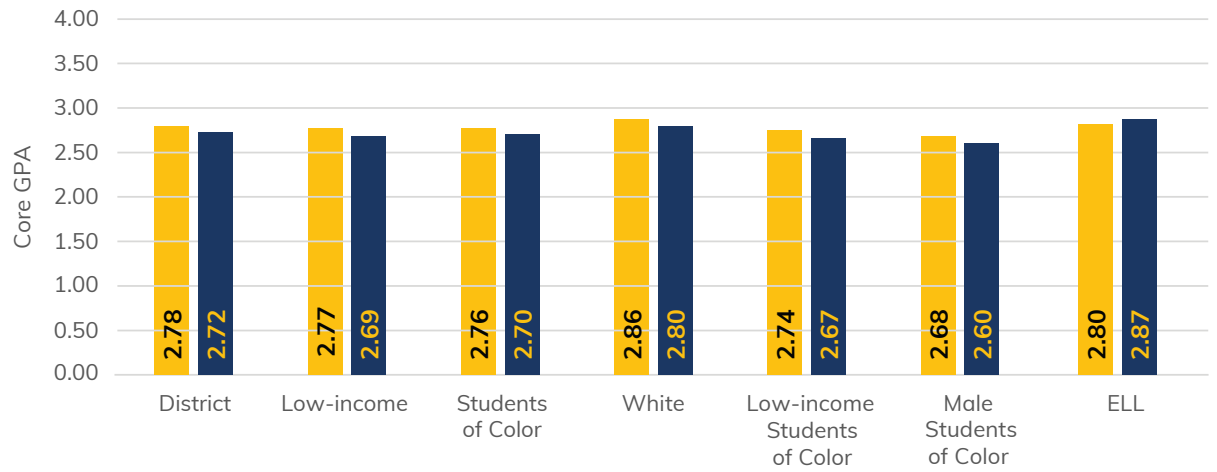


DIFFERENCE IS
STATISTICALLY
SIGNIFICANT
AT THE 90%
LEVEL



DIFFERENCE IS
STATISTICALLY
SIGNIFICANT
AT THE 95%
LEVEL

FIGURE 13: 2017 EIGHTH GRADE CORE GPA BY AVID PARTICIPATION



Legend



AVID

COMPARISON
GROUPDIFFERENCE IS
STATISTICALLY
SIGNIFICANT
AT THE 90%
LEVELDIFFERENCE IS
STATISTICALLY
SIGNIFICANT
AT THE 95%
LEVEL

Impact: Eighth-Grade Attendance (2017)

We find no evidence that AVID participation reduced the number of unexcused absent days or increased attendance in 2017. AVID

students and their comparison group counterparts had statistically similar unexcused absent days and attendance rates at the district level and across all focal subgroups (Figures 14& 15).

FIGURE 14: 2017 EIGHTH GRADE UNEXCUSED DAYS ABSENT BY AVID PARTICIPATION

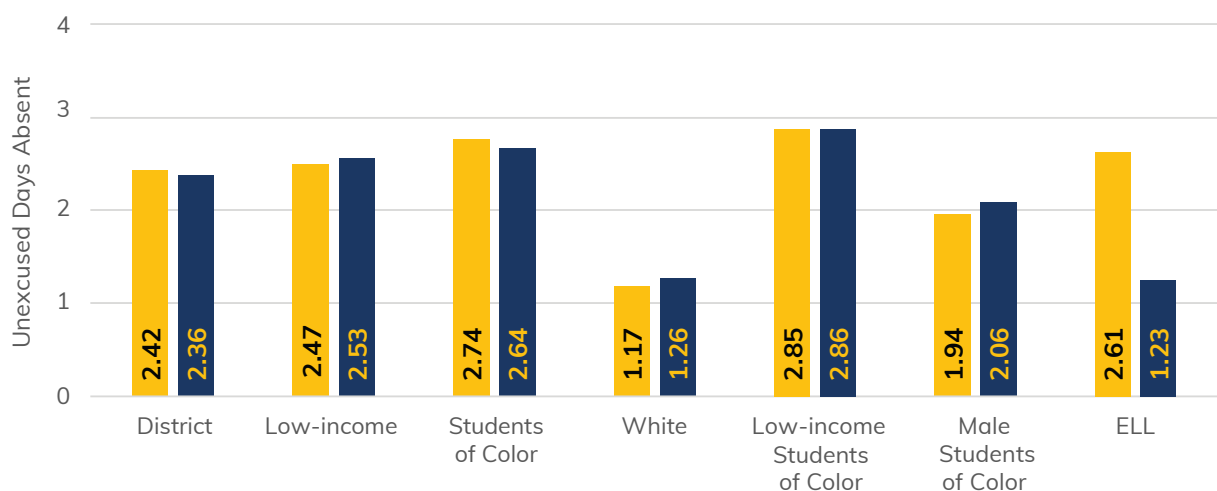
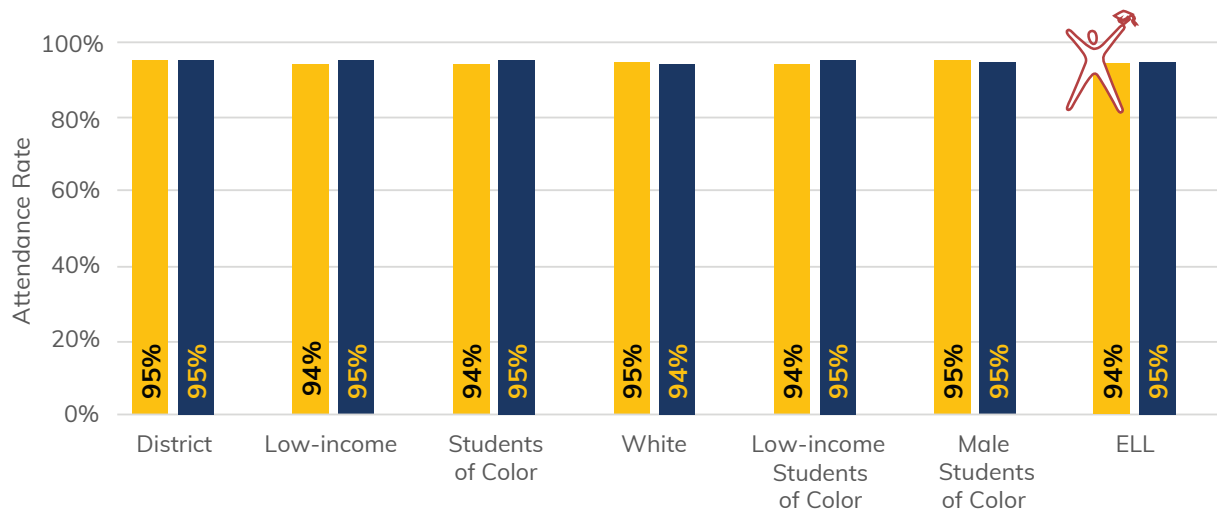


FIGURE 15: 2017 EIGHTH GRADE ATTENDANCE BY AVID PARTICIPATION



Legend



AVID

COMPARISON
GROUPDIFFERENCE IS
STATISTICALLY
SIGNIFICANT
AT THE 90%
LEVELDIFFERENCE IS
STATISTICALLY
SIGNIFICANT
AT THE 95%
LEVEL

Impact: Eighth-Grade Suspensions (2017)

We find some limited evidence that AVID participation reduced the number of in-school and out-of-school suspensions in 2017. At the district level and across most focal

subgroups, AVID eighth graders had fewer suspensions and fewer suspended days than their comparison group peers (Figures 16, 17 & 18). None of these differences between AVID participants and their peers, however, were large enough to achieve statistical significance.

FIGURE 16: 2017 EIGHTH-GRADE IN-SCHOOL SUSPENSIONS BY AVID PARTICIPATION

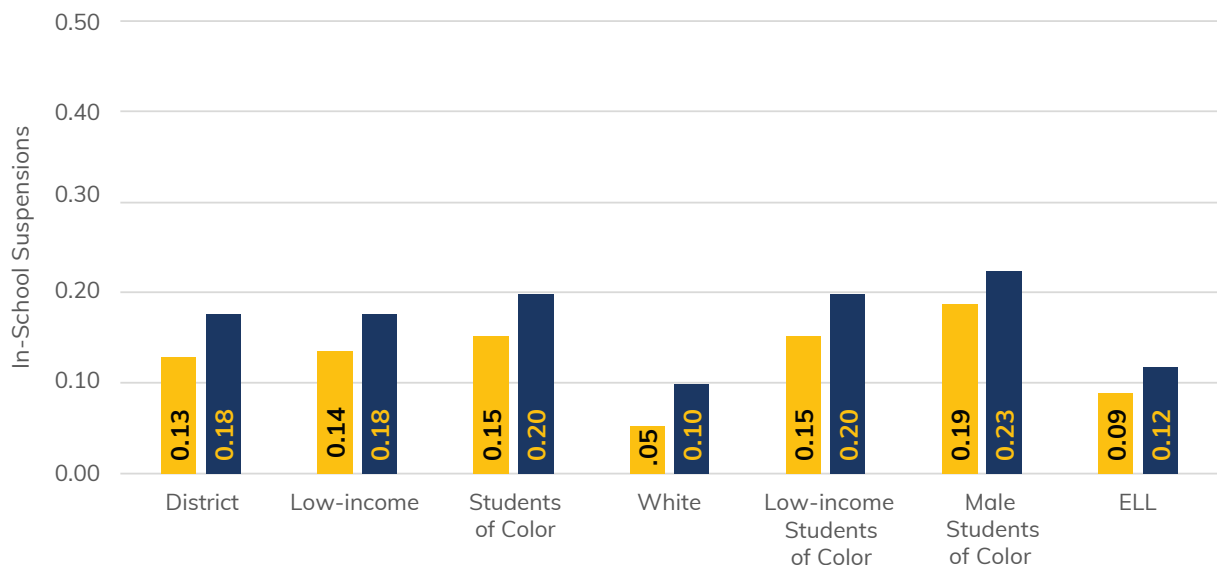
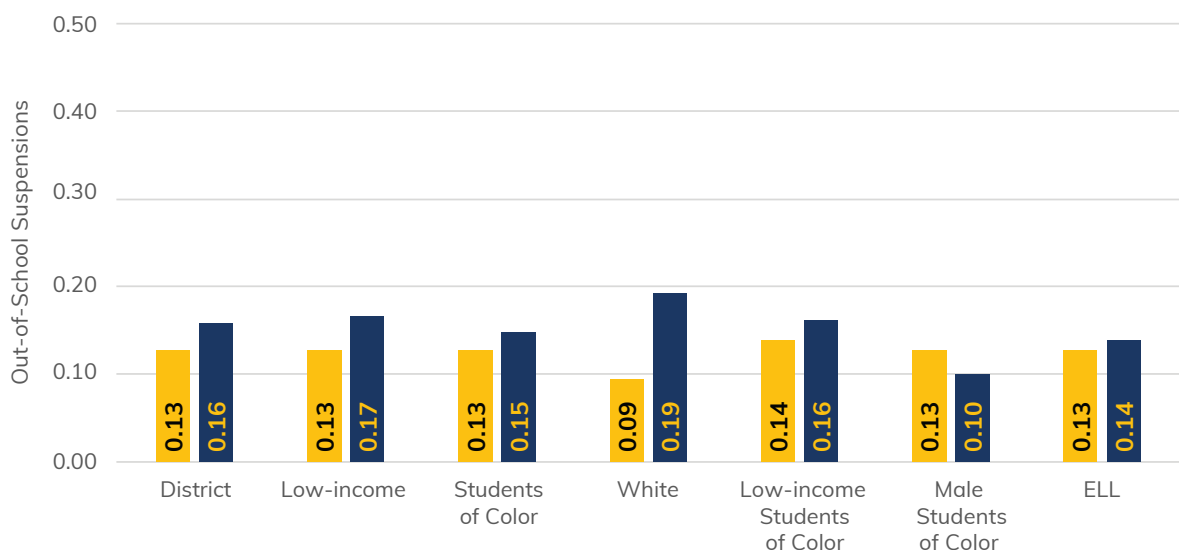


FIGURE 17: 2017 EIGHTH-GRADE OUT-OF-SCHOOL SUSPENSIONS BY AVID PARTICIPATION



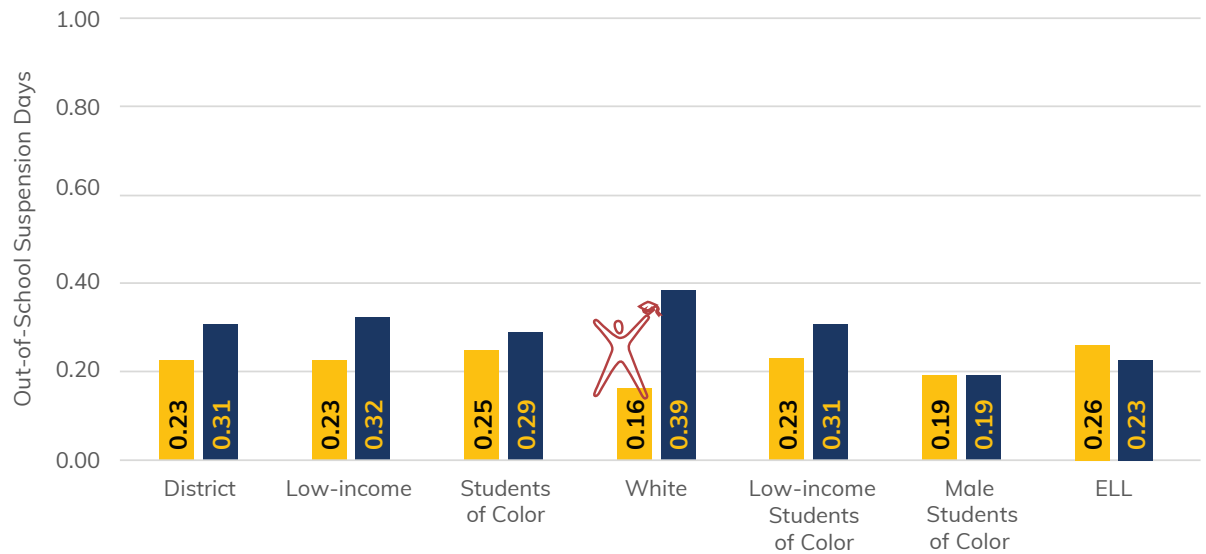
Legend



AVID

COMPARISON
GROUPDIFFERENCE IS
STATISTICALLY
SIGNIFICANT
AT THE 90%
LEVELDIFFERENCE IS
STATISTICALLY
SIGNIFICANT
AT THE 95%
LEVEL

FIGURE 18: 2017 EIGHTH-GRADE OUT-OF-SCHOOL SUSPENSION DAYS BY AVID PARTICIPATION



Legend



AVID

COMPARISON
GROUPDIFFERENCE IS
STATISTICALLY
SIGNIFICANT
AT THE 90%
LEVELDIFFERENCE IS
STATISTICALLY
SIGNIFICANT
AT THE 95%
LEVEL

Impact: Eighth-Grade MAP Test Scores (2017)

We find no evidence that AVID participation impacted eighth grade MAP scores in 2017.

Although AVID students earned slightly higher

average scores on the eighth grade spring MAP math and reading tests than their comparison group peers in 2017, these differences were not statistically significant (Figures 19 & 20). This was true at the district level and across most focal subgroups.

FIGURE 19: 2017 EIGHTH GRADE MAP MATH BY AVID PARTICIPATION

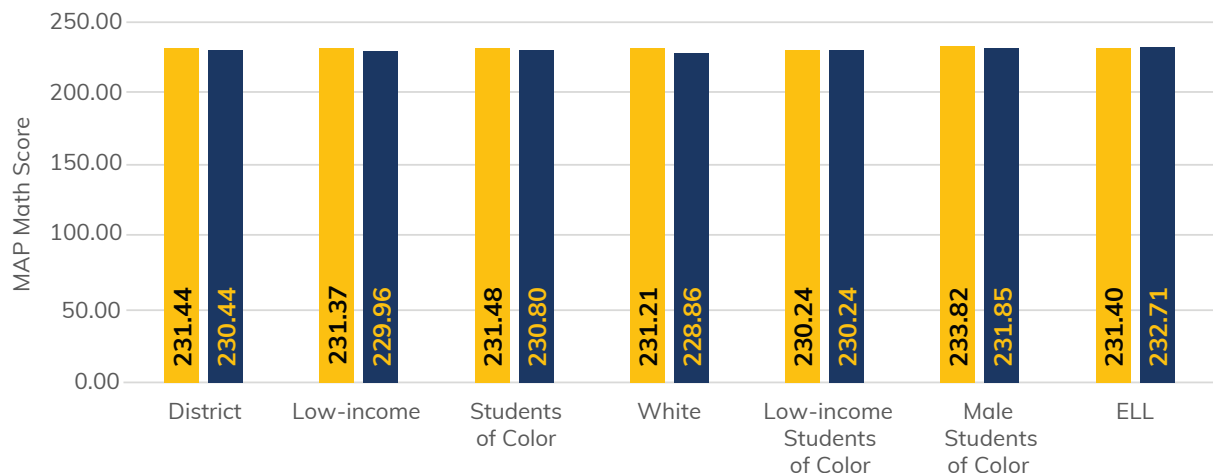
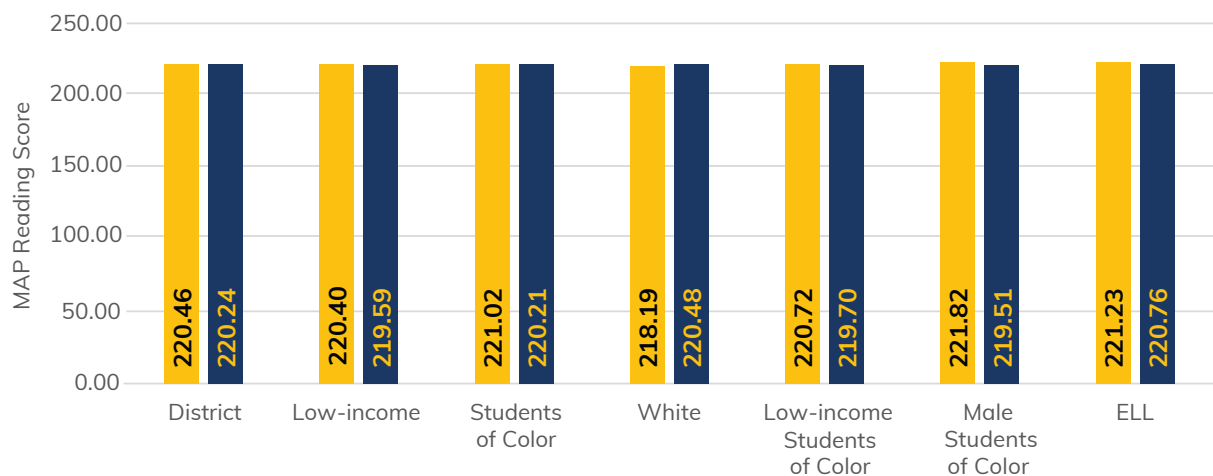


FIGURE 20: 2017 EIGHTH GRADE MAP READING BY AVID PARTICIPATION



Legend



AVID

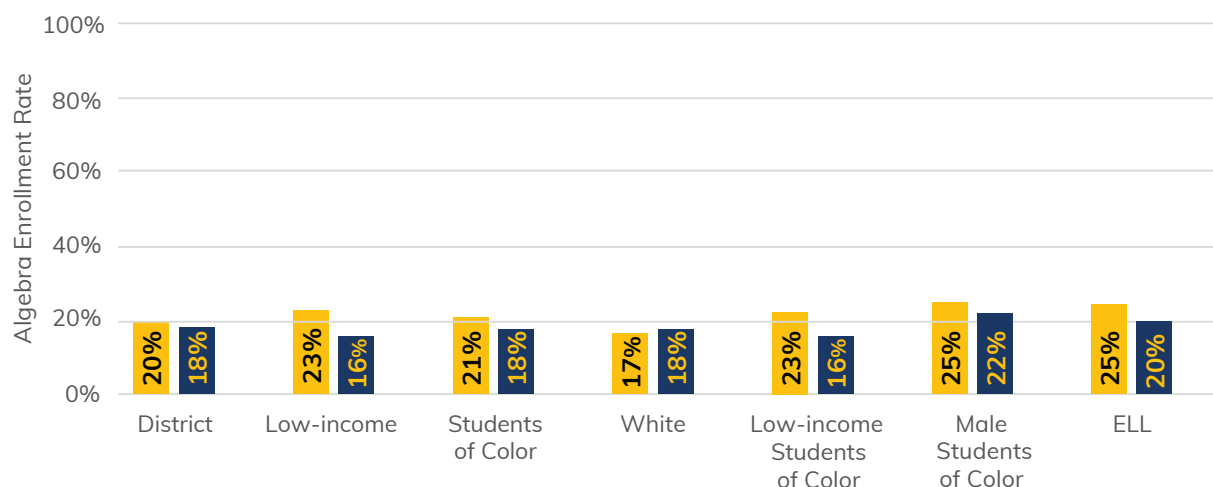
COMPARISON
GROUPDIFFERENCE IS
STATISTICALLY
SIGNIFICANT
AT THE 90%
LEVELDIFFERENCE IS
STATISTICALLY
SIGNIFICANT
AT THE 95%
LEVEL

Impact: Eighth-Grade Algebra Course Enrollment (2017)

We find evidence of limited, but not statistically significant, impacts of AVID participation on

algebra enrollment rates.¹² These impacts were strongest (seven percentage points) among low-income AVID participants and low-income AVID participants of color.

FIGURE 21: 2017 EIGHTH GRADE ALGEBRA ENROLLMENT BY AVID PARTICIPATION



¹²AVID participant and comparison groups are limited to students who were in the regular math sequence in sixth grade. This excludes students who took seventh grade math, eighth grade math, or any high school level math courses in sixth grade.

Eighth-Grade Impacts by High School Feeder Pattern

Looking specifically at high school feeder patterns (i.e. which high school the middle school feeds into), we found little variation in effects of AVID eighth grade participation in 2017 (Table 5). AVID students and their comparison group peers had statistically

similar outcomes on all measures within each of the four high school feeder patterns. Although we did find some evidence of positive effects within certain feeder patterns, due to the relatively small sizes of the feeder pattern samples, none of these effects achieved statistical significance. For all results in Table 7, sample sizes are small, and results should be interpreted cautiously.

TABLE 5: 2017 EIGHTH GRADE IMPACTS BY HIGH SCHOOL FEEDER PATTERN

| Outcome | East Schools | | La Follette Schools | | Memorial Schools | | West Schools | |
|-------------------------------|--------------|--------|---------------------|--------|------------------|--------|--------------|--------|
| | AVID | Comp. | AVID | Comp. | AVID | Comp. | AVID | Comp. |
| Cumulative GPA | 2.97 | 2.92 | 3.04 | 2.95 | 2.87 | 2.76 | 2.95 | 2.96 |
| Core GPA | 2.92 | 2.79 | 3.05 | 2.88 | 2.56 | 2.39 | 2.56 | 2.76 |
| Unexcused Days Absent | 1.74 | 2.31 | 1.08 | 3.35 | 2.74 | 2.66 | 4.17 | 1.24 |
| Attendance Rate | 95% | 95% | 96% | 94% | 95% | 94% | 93% | 96% |
| In-School Suspensions | 0.11 | 0.14 | 0.07 | 0.25 | 0.16 | 0.25 | 0.17 | 0.13 |
| Out-of-School Suspensions | 0.14 | 0.13 | 0.12 | 0.16 | 0.14 | 0.25 | 0.11 | 0.12 |
| Out-of-School Suspension Days | 0.35 | 0.30 | 0.11 | 0.38 | 0.26 | 0.51 | 0.17 | 0.15 |
| Algebra Course Enrollment | 0.28 | 0.32 | 0.26 | 0.14 | 0.11 | 0.12 | 0.15 | 0.10 |
| MAP Reading Score | 223.29 | 219.99 | 217.86 | 222.11 | 219.25 | 216.42 | 220.12 | 221.76 |
| MAP Math Score | 233.44 | 229.44 | 231.56 | 230.34 | 228.68 | 228.24 | 231.11 | 233.26 |

Note: Bold indicates statistically significant difference ($p < .05$)

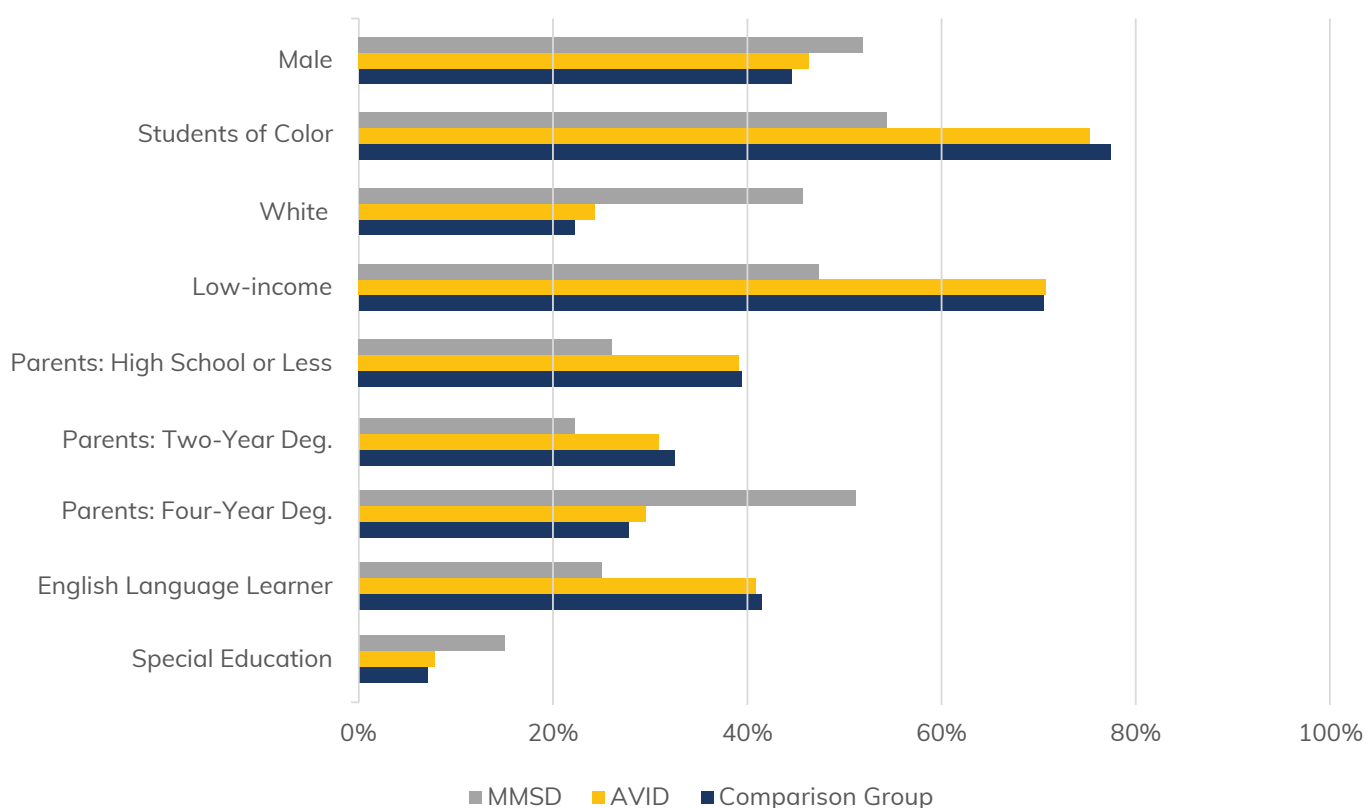
AVID Ninth-Grade Impacts

Ninth-Grade Sample

Overall, our statistical matching process resulted in a ninth grade combined cohort research sample with very similar AVID and comparison group students. Figure 22 presents the demographic makeup of the two groups compared to the general population of district students prior to matching. Both the AVID and comparison group

students were over two-thirds low-income and three-quarters students of color. Slightly less than half of each group was male, and approximately two-fifths were English language learners. Just under 40% of both groups had parents who had never attended college. Just under a third of both groups had at least one parent with a four-year degree or higher.

FIGURE 22: DEMOGRAPHIC CHARACTERISTICS OF NINTH GRADE SAMPLE



Consistent with the AVID selection process, students in the matched ninth grade sample came from the academic middle, with an average 3.0 cumulative GPA in sixth grade. Table 6 shows that overall, the AVID students and their comparison group counterparts in our sample looked

very similar to each other academically in the sixth grade in terms of their GPA, as well as their WKCE Reading and Math scores. All measures in Figure 22 and Table 6 were statistically equivalent between the two groups.

TABLE 6: ACADEMIC CHARACTERISTICS OF NINTH GRADE SAMPLE

| | MMSD | AVID | Comparison Group |
|--------------------------------|--------|--------|------------------|
| Sixth Grade Cumulative GPA | 3.12 | 3.01 | 3.02 |
| Sixth Grade Core GPA | 3.01 | 2.87 | 2.88 |
| Sixth Grade Attendance Rate | 96% | 96% | 96% |
| Sixth Grade Behavior Events | 1.75 | 0.86 | 0.83 |
| Sixth Grade WKCE Math Score | 513.97 | 500.87 | 500.82 |
| Sixth Grade WKCE Reading Score | 499.62 | 489.76 | 490.30 |

Ninth-Grade Impacts: Combined Cohort (2014-2017)

The impact estimates in this section are based on analyses combining four ninth grade cohorts: 2014-2017. They thus represent the average impacts of middle school AVID participation over a four-year period.¹³ **We find evidence that AVID participation has had significant positive average effects on ninth grade academic achievement and**

credit accumulation over the past four years. Among students from lower-income families and students of color, AVID participation has had positive impacts on students' cumulative and core GPA, attendance, and credit accumulation. We detail each of these findings below.

Legend



AVID



COMPARISON GROUP



DIFFERENCE IS
STATISTICALLY
SIGNIFICANT
AT THE 90%
LEVEL



DIFFERENCE IS
STATISTICALLY
SIGNIFICANT
AT THE 95%
LEVEL

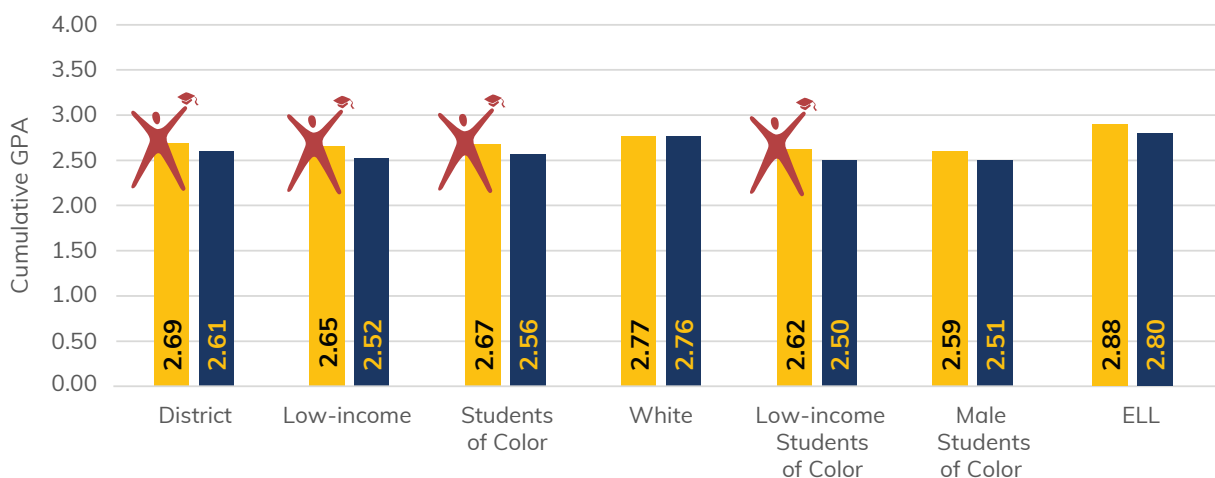
Impact: Ninth-Grade Grade Point Average

There is evidence of significant positive program impacts on ninth grade academic performance as measured by cumulative GPA. On average, students who participated in middle school AVID earned ninth grade cumulative GPAs 0.08 higher and core GPAs 0.07 higher than their peers (Figures 23 & 24). This positive effect was present across most subgroups, and was strongest among low-income students,

where it reached approximately 0.13 grade points. One exception was White AVID participants who had similar average cumulative and core GPAs to their non-AVID peers.

Key Finding: AVID students earned significantly higher cumulative ninth grade GPAs than their peers.

FIGURE 23: NINTH-GRADE CUMULATIVE GPA BY AVID MIDDLE SCHOOL PARTICIPATION



¹³ Ninth grade impact estimates represent the effects of participation in the AVID middle school program combined with the partial effects of participation in the AVID/TOPS ninth grade program.

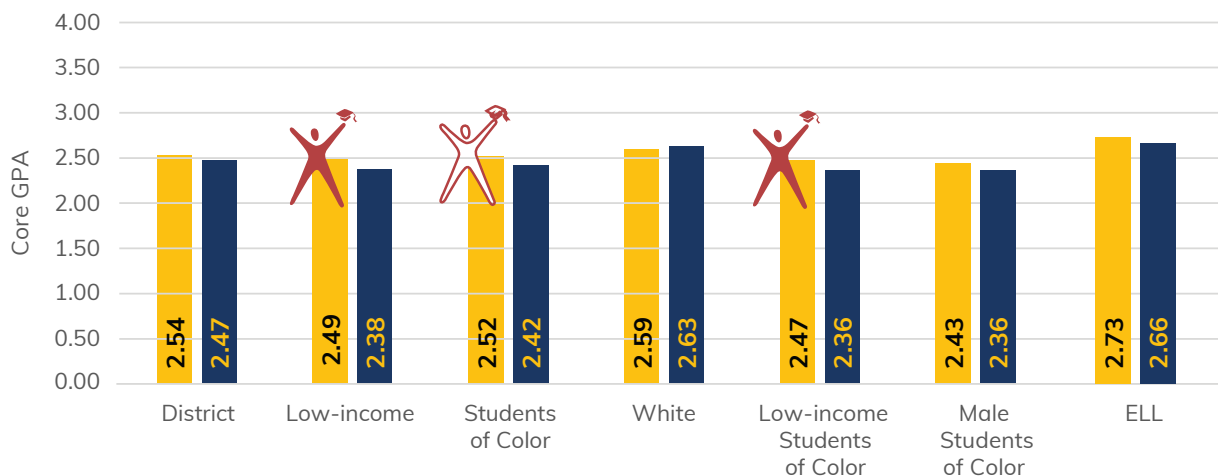
Legend



AVID

COMPARISON
GROUPDIFFERENCE IS
STATISTICALLY
SIGNIFICANT
AT THE 90%
LEVELDIFFERENCE IS
STATISTICALLY
SIGNIFICANT
AT THE 95%
LEVEL

FIGURE 24: NINTH-GRADE CORE GPA BY AVID MIDDLE SCHOOL PARTICIPATION



Legend



AVID

COMPARISON
GROUPDIFFERENCE IS
STATISTICALLY
SIGNIFICANT
AT THE 90%
LEVELDIFFERENCE IS
STATISTICALLY
SIGNIFICANT
AT THE 95%
LEVEL

Impact: Ninth-Grade Attendance

Estimates suggest that AVID middle school participation increased ninth grade attendance while reducing the number of unexcused absent days for certain subgroups of students. Ninth graders who participated in middle school AVID had fewer, although not statistically-significant, unexcused absent days and higher but non-significant attendance rates in the ninth grade than their matched peers (Figures 25 & 26). Across subgroups, with the exception of White students, attendance impacts ranged from one to two percentage points. Certain subgroups

had significantly higher attendance rates than their matched peers including low-income students and low-income students of color. For these subgroups, AVID participants had an attendance rate 1.5 percentage points higher than comparison group students.

Key Finding:
Low-income AVID students and low-income AVID students of color had significantly higher attendance rates in the ninth grade than their peers.

FIGURE 25: NINTH-GRADE UNEXCUSED DAYS ABSENT BY AVID MIDDLE SCHOOL PARTICIPATION

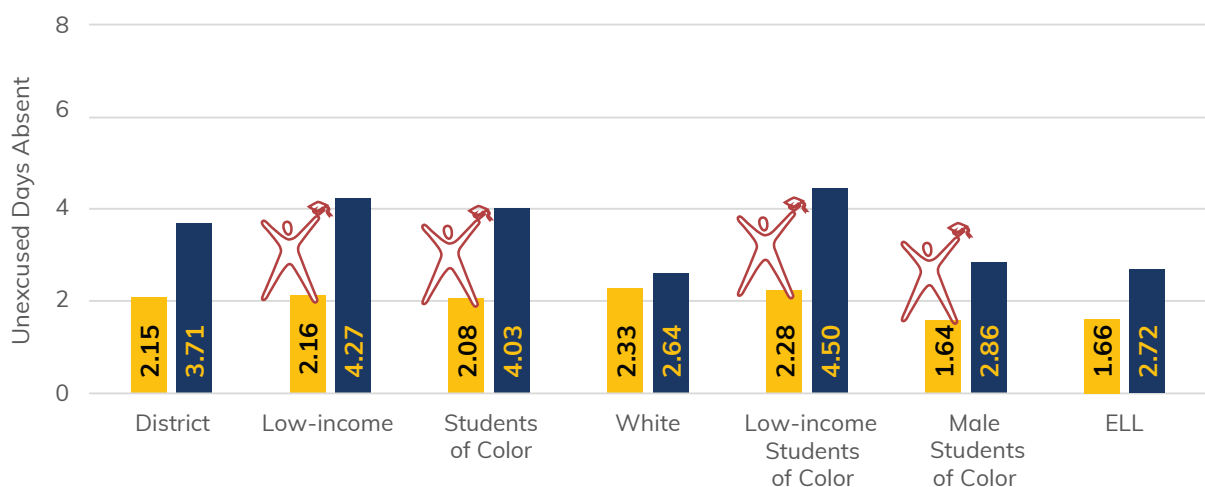
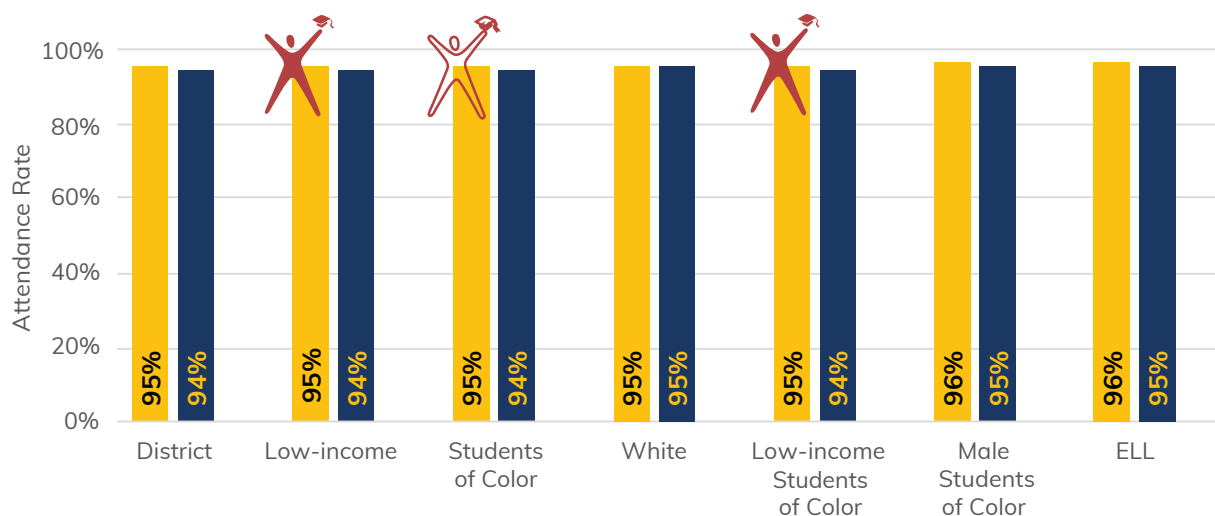


FIGURE 26: NINTH-GRADE ATTENDANCE BY AVID MIDDLE SCHOOL PARTICIPATION



Legend



AVID

COMPARISON
GROUPDIFFERENCE IS
STATISTICALLY
SIGNIFICANT
AT THE 90%
LEVELDIFFERENCE IS
STATISTICALLY
SIGNIFICANT
AT THE 95%
LEVEL

Impact: Ninth-Grade Credit Accumulation

There is evidence that AVID middle school participation increased the number of credits earned in the ninth grade. AVID middle school participants earned significantly more credits in the ninth grade than comparison group students (Figure 27). This difference was statistically significant for all subgroups except White students and English language learners who nevertheless earned slightly more credits if they were AVID participants. Middle school AVID participants also failed significantly fewer courses during

ninth grade than their comparison group counterparts (Figure 28). This difference, which amounted to about half a course on average, was significant at the district level and across all subgroups except White students, male students of color, and English language learners.

Key Finding:
AVID students
earned significantly
more credits
and failed fewer
courses in the
ninth grade than
their peers.

FIGURE 27: NINTH-GRADE EARNED CREDITS BY AVID MIDDLE SCHOOL PARTICIPATION

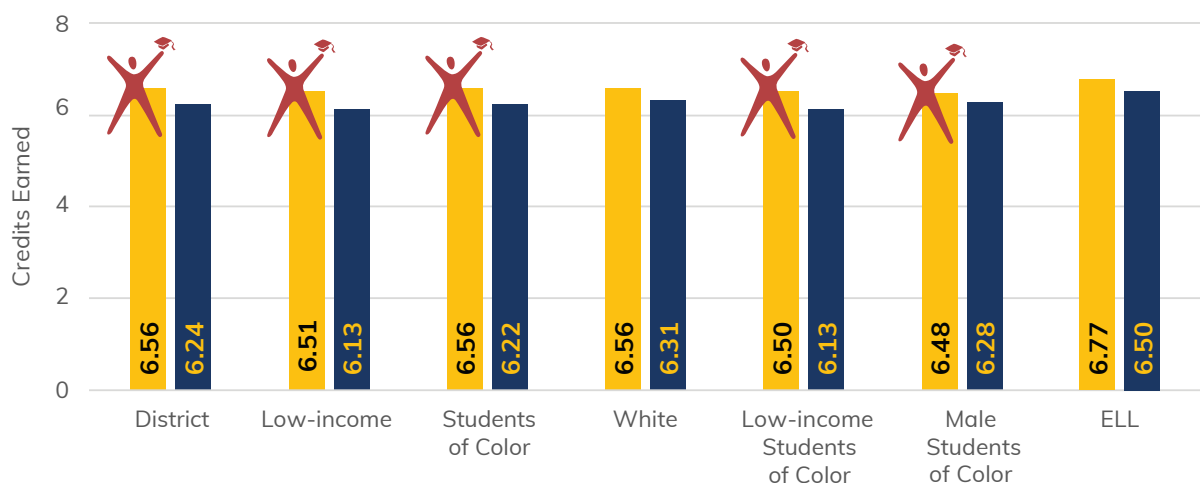
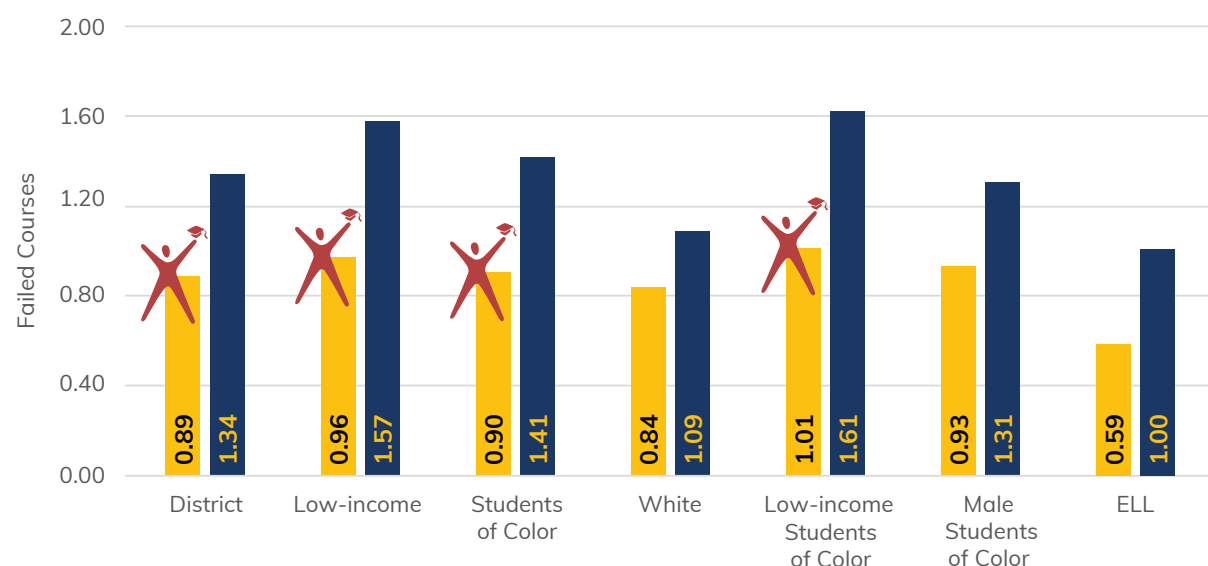


FIGURE 28: NINTH-GRADE FAILED COURSES BY AVID MIDDLE SCHOOL PARTICIPATION



Legend



AVID

COMPARISON
GROUPDIFFERENCE IS
STATISTICALLY
SIGNIFICANT
AT THE 90%
LEVELDIFFERENCE IS
STATISTICALLY
SIGNIFICANT
AT THE 95%
LEVEL

Impact: Ninth-Grade Suspensions

There is limited evidence that AVID middle school participation decreased the number of suspensions in the ninth grade for certain subgroups of students. While there were no significant effects of AVID at the district level, AVID middle school participants who were male students of color received significantly fewer (0.07) in-school suspensions than their comparison group peers (Figure 29). While nearly all subgroups of AVID middle school participants received significantly

fewer out-of-school suspensions in the ninth grade than comparison group students (Figure 30), these results were not significant. There were no significant effects of AVID at the district level or across subgroups on out-of-school suspension days (Figure 31).

Key Finding:
Male AVID students of color had significantly fewer in-school suspensions in the ninth grade than their peers.

FIGURE 29: NINTH-GRADE IN-SCHOOL SUSPENSIONS BY AVID MIDDLE SCHOOL PARTICIPATION

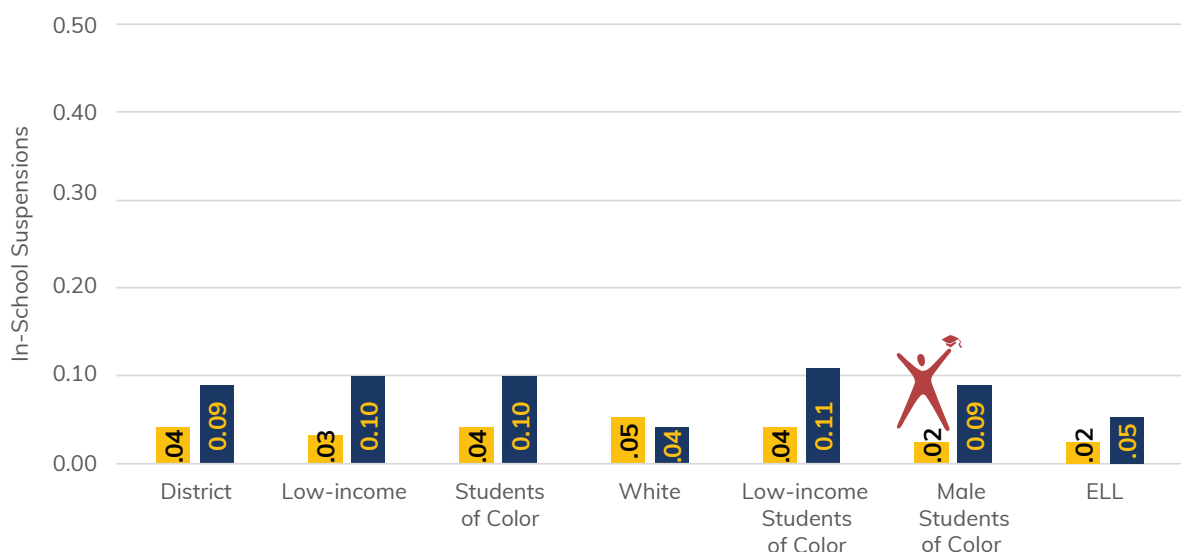
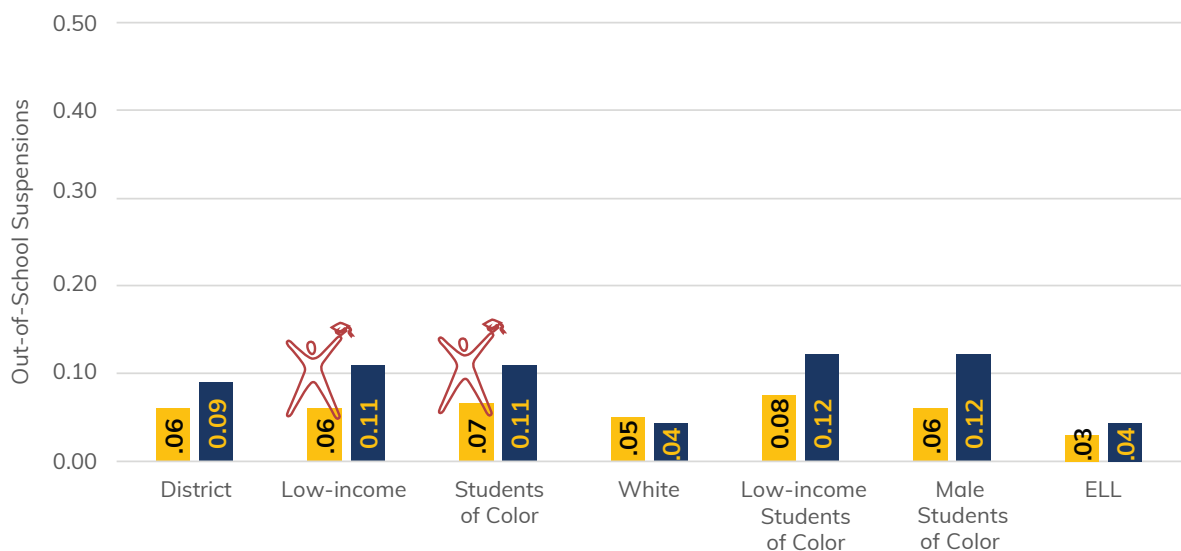


FIGURE 30: NINTH-GRADE OUT-OF-SCHOOL SUSPENSIONS BY AVID MIDDLE SCHOOL PARTICIPATION



Legend



AVID



COMPARISON
GROUP

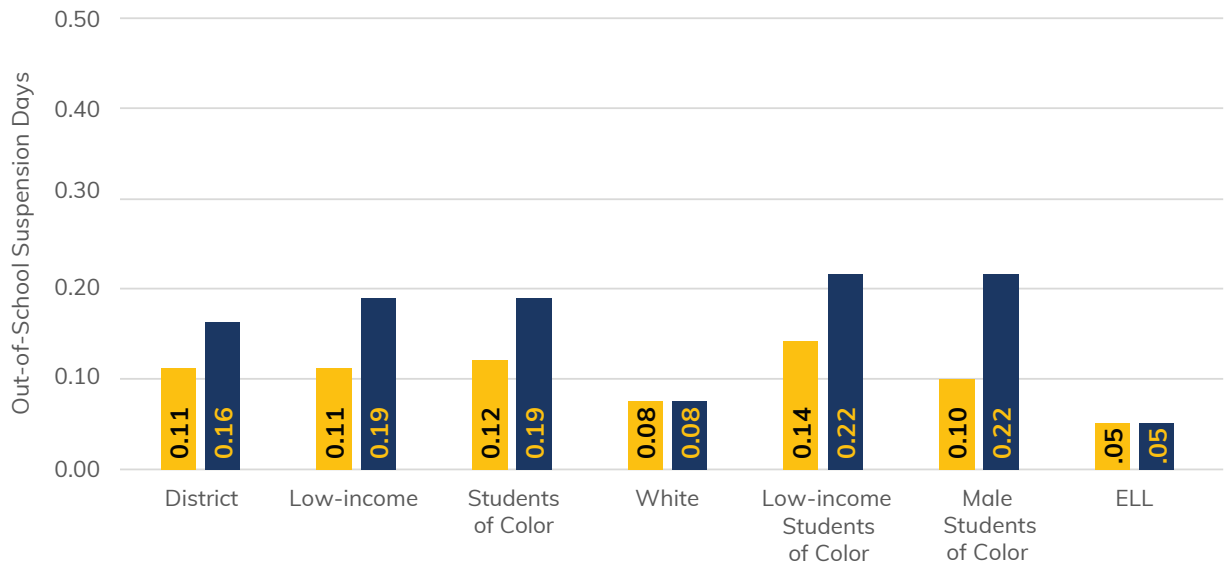


DIFFERENCE IS
STATISTICALLY
SIGNIFICANT
AT THE 90%
LEVEL



DIFFERENCE IS
STATISTICALLY
SIGNIFICANT
AT THE 95%
LEVEL

FIGURE 31: NINTH-GRADE OUT-OF-SCHOOL SUSPENSION DAYS BY AVID MIDDLE SCHOOL PARTICIPATION



Legend



AVID

COMPARISON
GROUPDIFFERENCE IS
STATISTICALLY
SIGNIFICANT
AT THE 90%
LEVELDIFFERENCE IS
STATISTICALLY
SIGNIFICANT
AT THE 95%
LEVEL

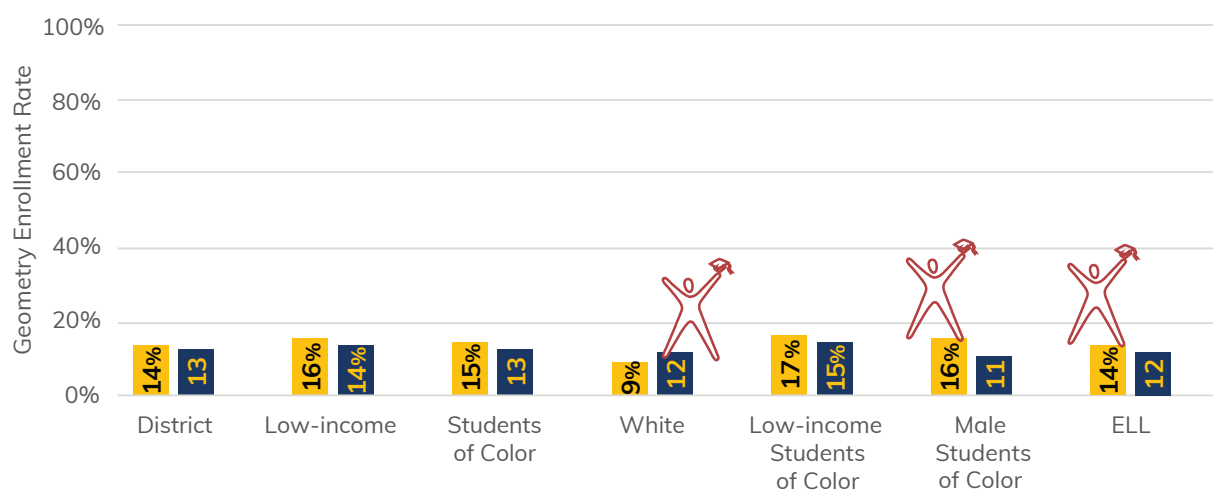
Impact: Geometry Enrollment

There is evidence that AVID middle school students had similar enrollment in ninth grade geometry as compared to peers. AVID middle school participants enrolled in geometry at similar rates as their matched peers (Figure 32).¹⁴ For male students of color, AVID participants enrolled in geometry at a slightly higher rate, approximately five

percentage points higher. For White students, however, AVID participants enrolled in geometry at a slightly lower rate than matched peers.

Key Finding:
AVID students
had similar
enrollment in
geometry in
the ninth grade
as compared
to their peers.

FIGURE 32: NINTH-GRADE GEOMETRY ENROLLMENT BY AVID MIDDLE SCHOOL PARTICIPATION



¹⁴ AVID participant and comparison groups are limited to students who were in the regular math sequence in sixth grade. This excludes students who took seventh grade math, eighth grade math, or any high school level math courses in sixth grade.

Legend



AVID

COMPARISON
GROUPDIFFERENCE IS
STATISTICALLY
SIGNIFICANT
AT THE 90%
LEVELDIFFERENCE IS
STATISTICALLY
SIGNIFICANT
AT THE 95%
LEVEL

Impact: Ninth-Grade ASPIRE Test Scores

We did not find evidence of AVID effects on average ninth grade ASPIRE test performance. At the district level and across

most subgroups, AVID students earned higher, but statistically indistinguishable scores on the ASPIRE math and reading tests in relation to their matched peers (Figures 33 & 34).

FIGURE 33: NINTH-GRADE ASPIRE MATH SCORES BY AVID PARTICIPATION

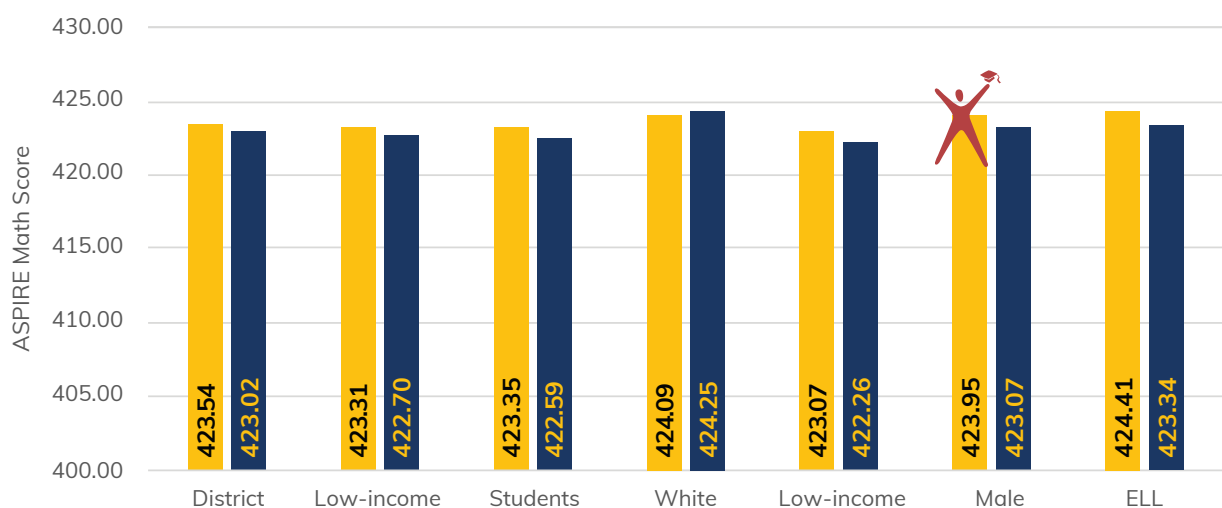
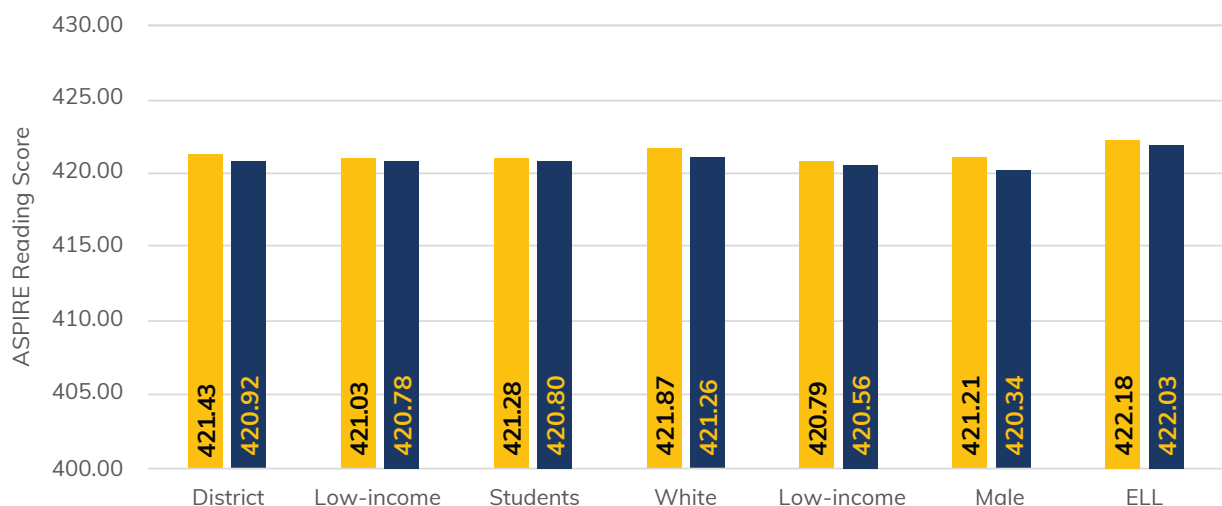


FIGURE 34: NINTH-GRADE ASPIRE READING SCORES BY AVID PARTICIPATION



¹⁴ AVID participant and comparison groups are limited to students who were in the regular math sequence in sixth grade. This excludes students who took seventh grade math, eighth grade math, or any high school level math courses in sixth grade.

Comparison of Annual Ninth Grade Impacts: 2014 to 2017

An important goal of this report is to examine whether the effects of middle school AVID participation on ninth grade outcomes have remained consistent over the past four years of program implementation. Here, we present program impact estimates for each of four ninth grade cohorts—starting with the 2014 cohort, and ending with the 2017 cohort. We also note whether effects over the four-year period were statistically different from each other. **In general, we found that program effects remained consistent during that period, with a few exceptions.** We discuss general effect consistency for the district below.

Interpreting Annual Effects Comparison Charts

We illustrate annual comparisons of middle school AVID effects on ninth grade outcomes using standard bar charts. In these charts, each colored bar represents the estimated program effect on a particular outcome in a given year. In Figure 33, for example, the effect of 0.06 in the first blue bar indicates that AVID participants had an average cumulative GPA 0.06 grade points higher than their comparison group counterparts in 2014.

Because these numbers are estimates calculated from a single sample of students, the line overlaying each bar represents the range of values where we can be confident the “true” population effect actually lies. If the line does not overlap the zero value on the left side of the chart (Y-axis), we can say that the estimate is “significant” (i.e. not zero) with 95% confidence.

GPA Effects (2014-2017)

Our estimates indicate that the AVID program has had **positive annual effects on cumulative and core GPA in the ninth grade for all years but 2017 (Figures 35 & 36)**. In 2014 and 2015, the effects were relatively small and did not reach statistical significance. In 2016, however, the effects on both cumulative and core GPA were larger, and were both significant. In 2017, the effects on both cumulative and core GPA were slightly negative but

not statistically significant. When we compared effect across years we found a significant difference between 2017 and prior years that suggests that actual program effects were indeed different in the most recent year.

Key Finding:
The AVID program has had positive annual effects on ninth-grade cumulative and core GPA with the exception of 2017.

FIGURE 35: EFFECTS ON CUMULATIVE GPA (2014-2017)

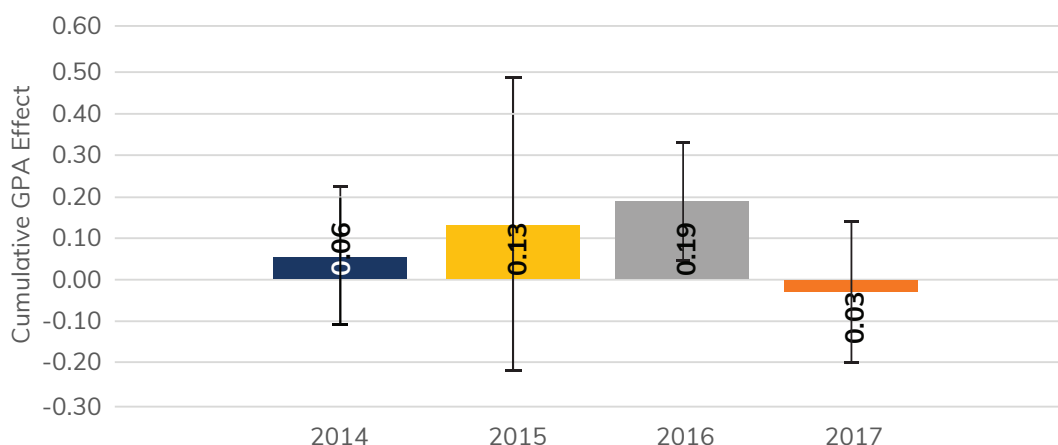
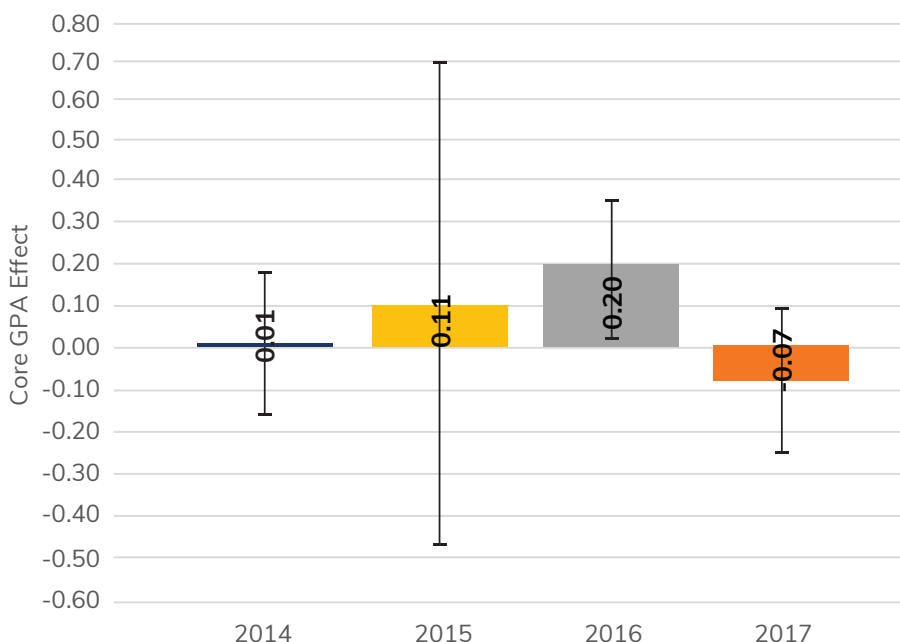


FIGURE 36: EFFECTS ON CORE GPA (2014-2017)



Attendance Effects (2014-2017)

We also find evidence that the AVID program has had positive effects on school attendance each year, though with some variation. Positive impacts on attendance were relatively small and non-significant in 2014 and 2015 (Figures 37 & 38). In 2016 and 2017, the program effect appeared to increase, with AVID students logging approximately two fewer unexcused days absent than their peers, though these results were also not statistically significant. In 2016 and 2017, AVID

participants also had an overall attendance rate more than a percentage point higher than similar non-AVID students. When we statistically compared 2017 estimates to those of prior years, we found no significant differences.

Key Finding:
The AVID program has had positive annual effects on school attendance.

FIGURE 37: EFFECTS ON UNEXCUSED DAYS ABSENT (2014-2017)

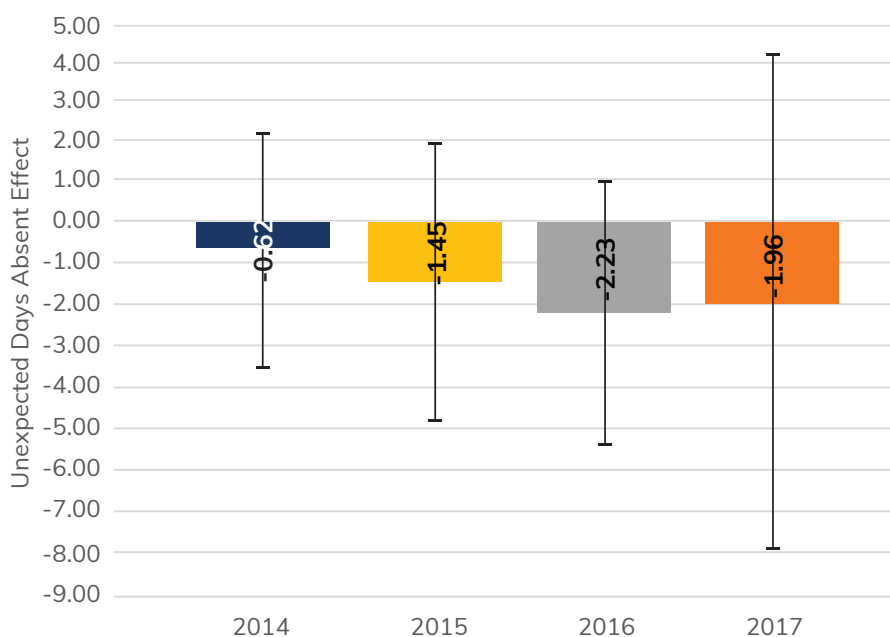
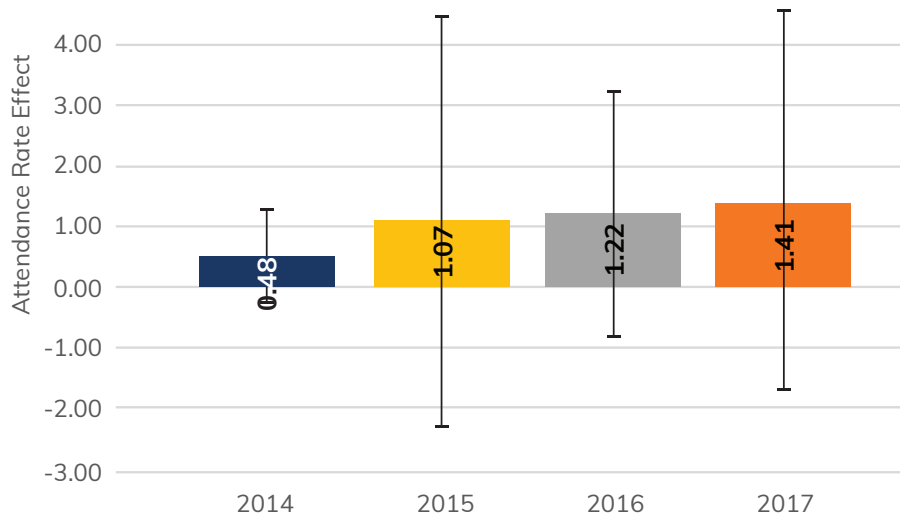


FIGURE 38: EFFECTS ON ATTENDANCE RATE (2014-2017)



Credit Accumulation Effects (2014-2017)

We find strong evidence that the AVID program has had consistent positive effects on ninth grade credit accumulation over the past four years (Figures 39 & 40), especially in 2014 through 2016. In the first three of these years, students who participated in middle school AVID earned a third of a credit more on average in the ninth grade than their matched non-program counterparts. In 2017, while AVID participants continued to have more credits earned than their matched peers, the difference was

not statistically significant. In 2014 through 2017, AVID students failed fewer courses on average as ninth graders with varying levels of statistical significance. In the case of both earned credits and failed courses, AVID impacts were not significantly different between 2014 and 2017.

Key Finding:
The AVID program has had consistent positive annual effects on credit accumulation.

FIGURE 39: EFFECTS ON CREDITS EARNED (2014-2017)

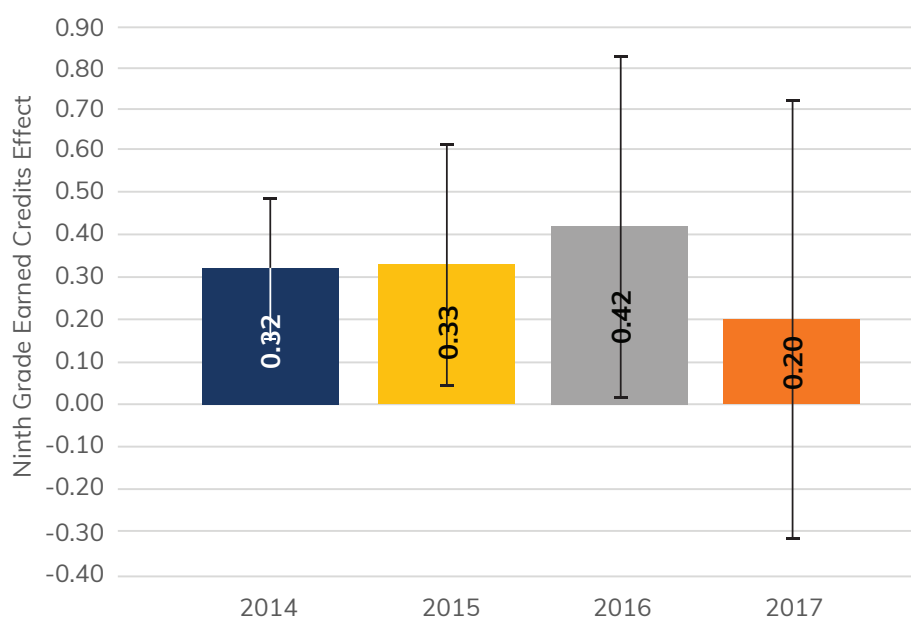
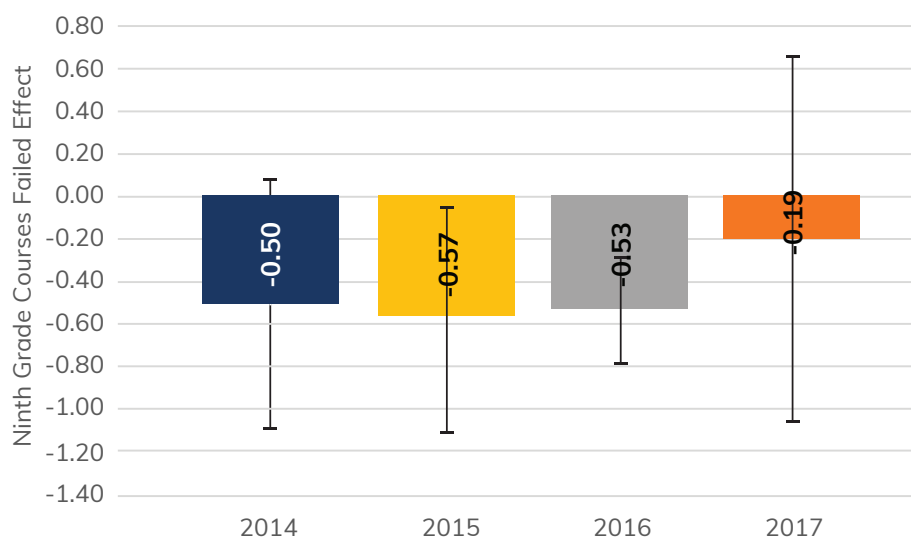


FIGURE 40: EFFECTS ON FAILED COURSES (2014-2017)



Suspension Effects (2014-2017)

We find limited and varying evidence that the AVID program has had positive effects on ninth grade suspensions over the past four years (Figures 41 through 43). Middle school AVID participants had either close to zero differences or small decreases in both the number of suspensions and the number of suspension

days as compared to their peers. When we compared effect across years we found no significant difference between 2017 and prior years.

Key Finding:
The AVID program has a small and varying effect on ninth grade suspensions.

FIGURE 41: EFFECTS ON IN-SCHOOL SUSPENSIONS (2014-2017)

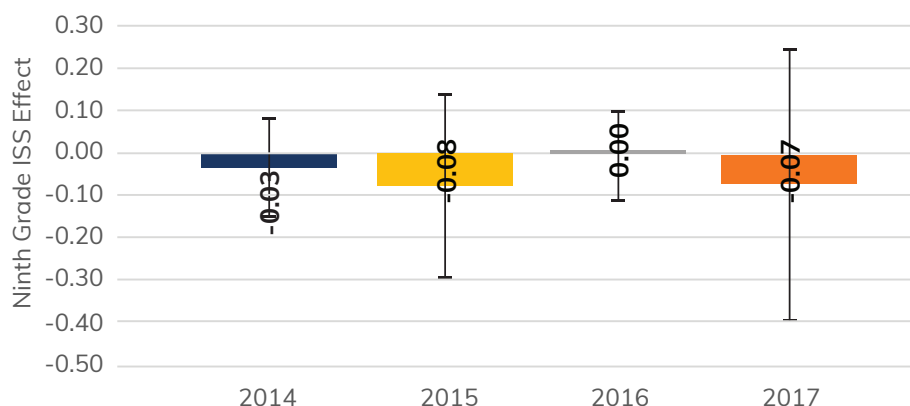


FIGURE 42: EFFECTS ON OUT-OF-SCHOOL SUSPENSIONS (2014-2017)

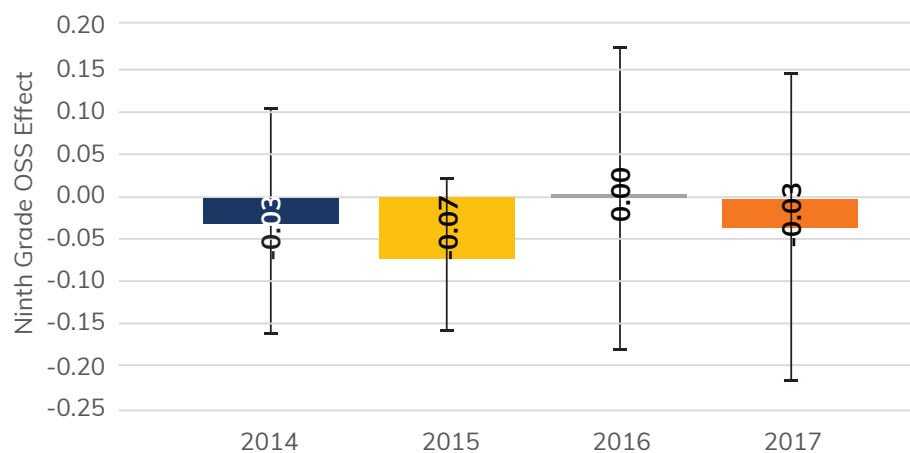
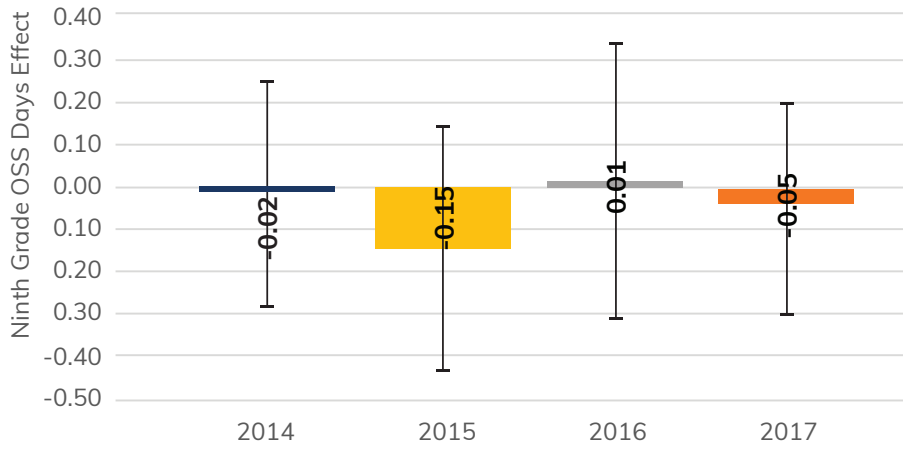


FIGURE 43: EFFECTS ON OUT-OF-SCHOOL SUSPENSION DAYS (2014-2017)



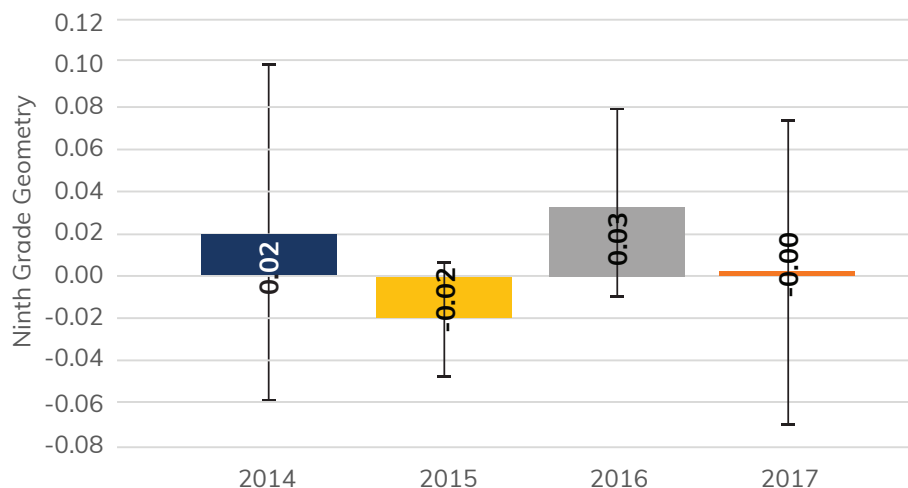
Geometry Enrollment Effects (2014-2017)

Finally, we find no evidence that the AVID program has had positive effects on ninth geometry enrollment over the past four years (Figure 44). Students who participated in middle school AVID enrolled in geometry

at similar rates to their matched peers in all years. Tests of differences across years revealed no significant changes from 2014 to 2017.

Key Finding:
AVID program participants have had consistently similar rates of geometry enrollment in ninth grade compared to their peers.

FIGURE 44: EFFECTS ON GEOMETRY ENROLLMENT (2014-2017)



Ninth-Grade Impacts: 2017 Cohort

As with the eighth grade impacts, below we break out 2017 ninth grade impacts by demographic subgroup and high school feeder pattern. **Our evaluation of the 2017 middle school AVID program indicates that it has had**

positive but non-significant average effects on ninth grade attendance, credit accumulation, suspensions, ASPIRE math scores, and ASPIRE reading scores. We detail each of these findings below.

Legend



AVID



COMPARISON GROUP



DIFFERENCE IS
STATISTICALLY
SIGNIFICANT
AT THE 90%
LEVEL



DIFFERENCE IS
STATISTICALLY
SIGNIFICANT
AT THE 95%
LEVEL

Impact: Ninth-Grade Grade Point Average (2017)

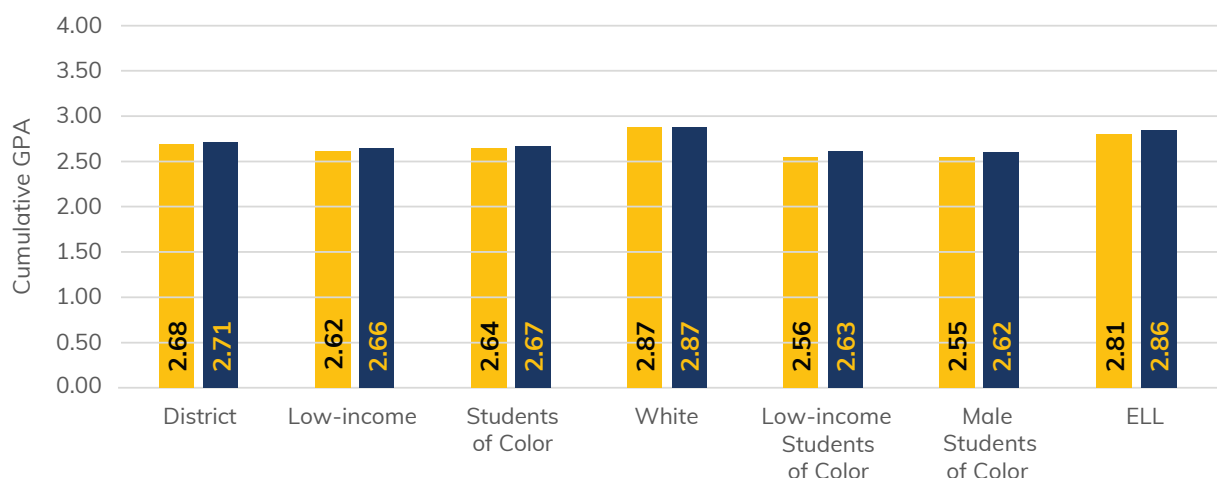
Among ninth graders in 2017, students who had participated in the AVID middle school program earned similar cumulative and core GPAs as compared to their matched peers

(Figures 45 & 46).

This was true at the district level and across all focal subgroups.

2017 Cohort Key Finding: Students who were in middle school AVID had similar achievement in the ninth grade as compared to peers.

FIGURE 45: 2017 NINTH GRADE CUMULATIVE GPA BY AVID PARTICIPATION



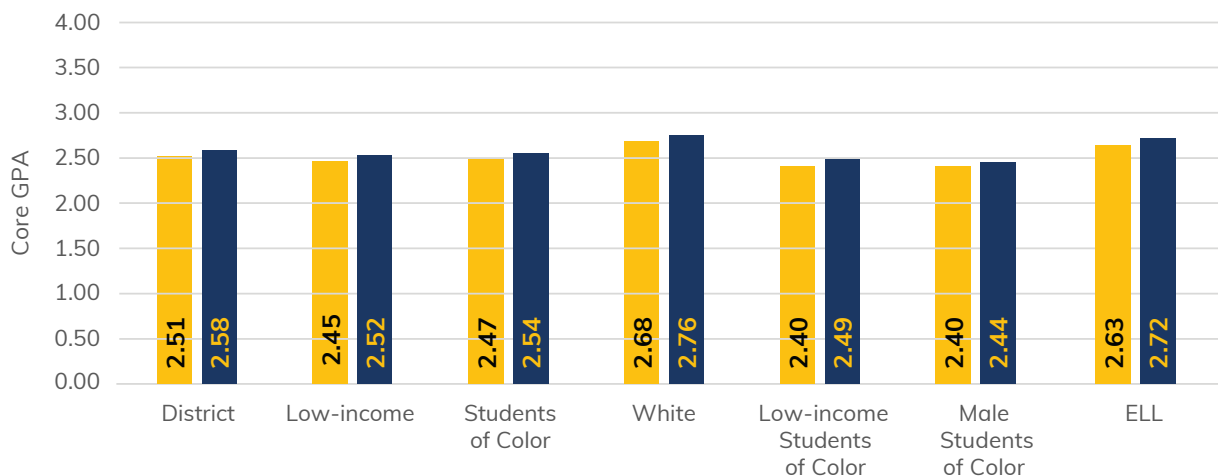
Legend



AVID

COMPARISON
GROUPDIFFERENCE IS
STATISTICALLY
SIGNIFICANT
AT THE 90%
LEVELDIFFERENCE IS
STATISTICALLY
SIGNIFICANT
AT THE 95%
LEVEL

FIGURE 46: 2017 NINTH GRADE CORE GPA BY AVID PARTICIPATION



Legend



AVID

COMPARISON
GROUPDIFFERENCE IS
STATISTICALLY
SIGNIFICANT
AT THE 90%
LEVELDIFFERENCE IS
STATISTICALLY
SIGNIFICANT
AT THE 95%
LEVEL

Impact: Ninth-Grade Attendance (2017)

AVID middle school participation had a positive but no statistically significant effect on ninth grade attendance among students in the 2017 cohort. Ninth graders who participated in middle school AVID had fewer unexcused absent days—about two fewer days on average (Figure 47). They also had higher overall attendance rates than their matched peers (Figure 48). While these

patterns held true both at the district level and across all focal subgroups but White students, none of the results were statistically significant.

2017 Cohort Key Finding: Students who were in middle school AVID had higher ninth grade attendance than their peers.

FIGURE 47: 2017 NINTH GRADE UNEXCUSED DAYS ABSENT BY AVID PARTICIPATION

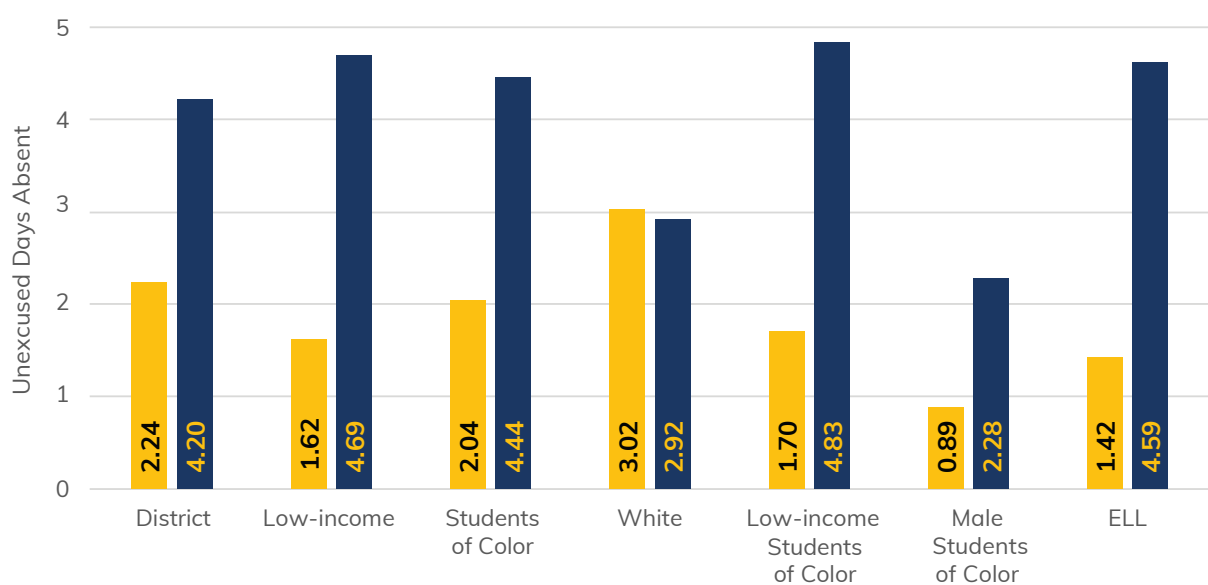
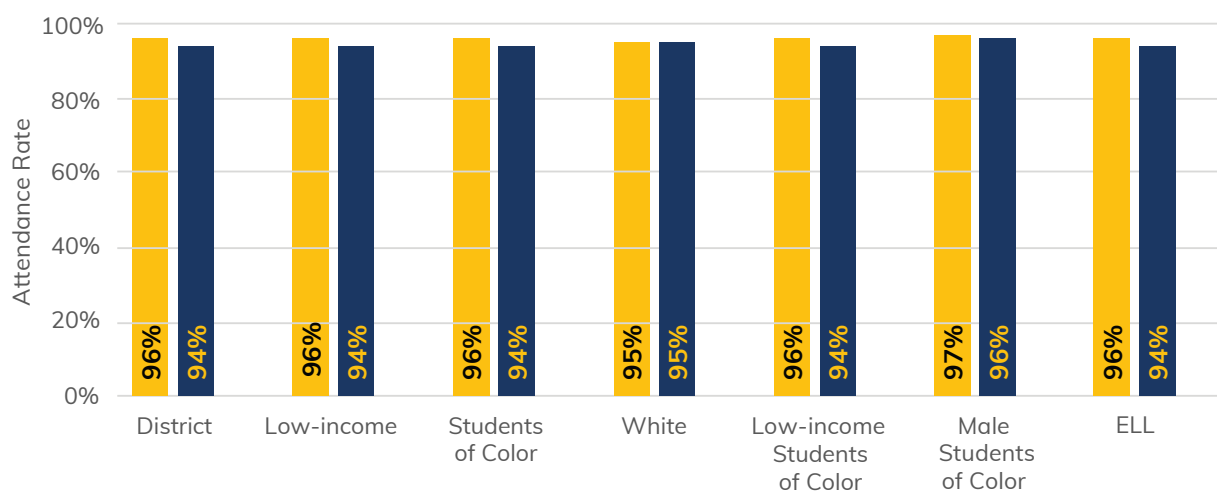


FIGURE 48: 2017 NINTH GRADE ATTENDANCE BY AVID PARTICIPATION



Legend



AVID

COMPARISON
GROUPDIFFERENCE IS
STATISTICALLY
SIGNIFICANT
AT THE 90%
LEVELDIFFERENCE IS
STATISTICALLY
SIGNIFICANT
AT THE 95%
LEVEL

Impact: Ninth-Grade Credit Accumulation (2017)

We find that students who were in middle school AVID earned more credits and failed fewer courses in the ninth grade than their non-AVID counterparts, though both results were non-statistically significant. On average, this amounted to a fifth of a credit more for AVID students (Figure 49). AVID students also failed about 0.2 courses less on average than

their matched peers (Figure 50). There were similar effects across all subgroups except White students.

2017 Cohort Key Finding: Students who were in middle school AVID earned more credits and failed fewer courses in the ninth grade than their peers.

FIGURE 49: 2017 NINTH GRADE EARNED CREDITS BY AVID PARTICIPATION

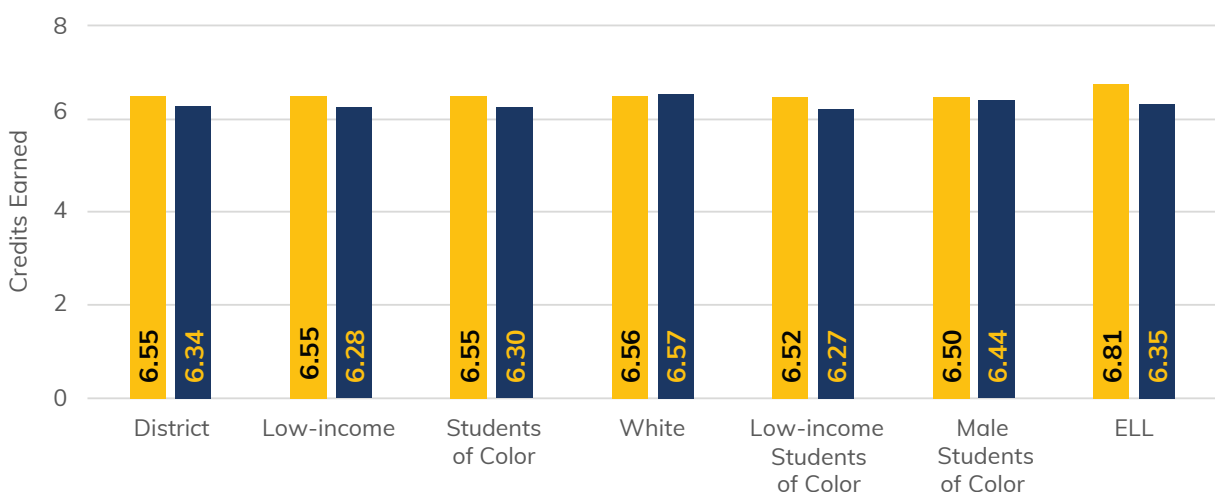
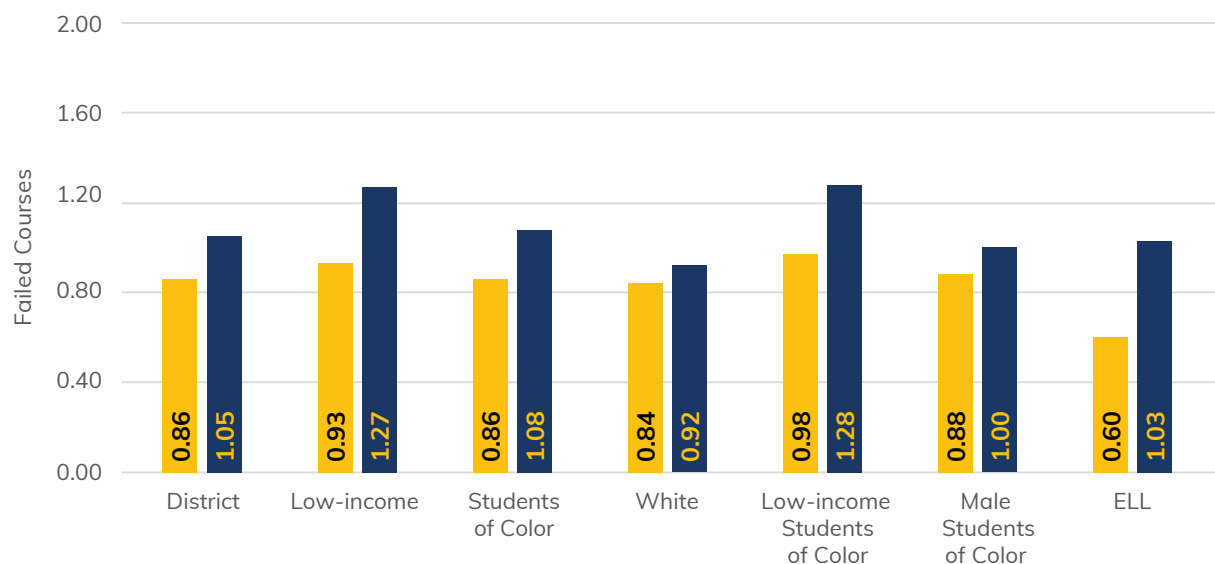


FIGURE 50: 2017 NINTH GRADE FAILED COURSES BY AVID PARTICIPATION



Legend



AVID

COMPARISON
GROUPDIFFERENCE IS
STATISTICALLY
SIGNIFICANT
AT THE 90%
LEVELDIFFERENCE IS
STATISTICALLY
SIGNIFICANT
AT THE 95%
LEVEL

Impact: Ninth-Grade Suspensions (2017)

There is evidence that AVID middle school participation had a positive but non-significant effect on ninth grade suspensions among students in the 2017 cohort. Ninth graders that participated in AVID had fewer but non-significantly in-school suspensions (Figure 51), out-of-school suspensions (Figure 52), and out-of-school suspension days (Figure 53).

There were similar effects across all subgroups except White students and male students of color.

2017 Cohort Key Finding: Students who were in middle school AVID had fewer suspensions in the ninth grade than their peers.

FIGURE 51: 2017 NINTH GRADE IN-SCHOOL SUSPENSIONS BY AVID PARTICIPATION

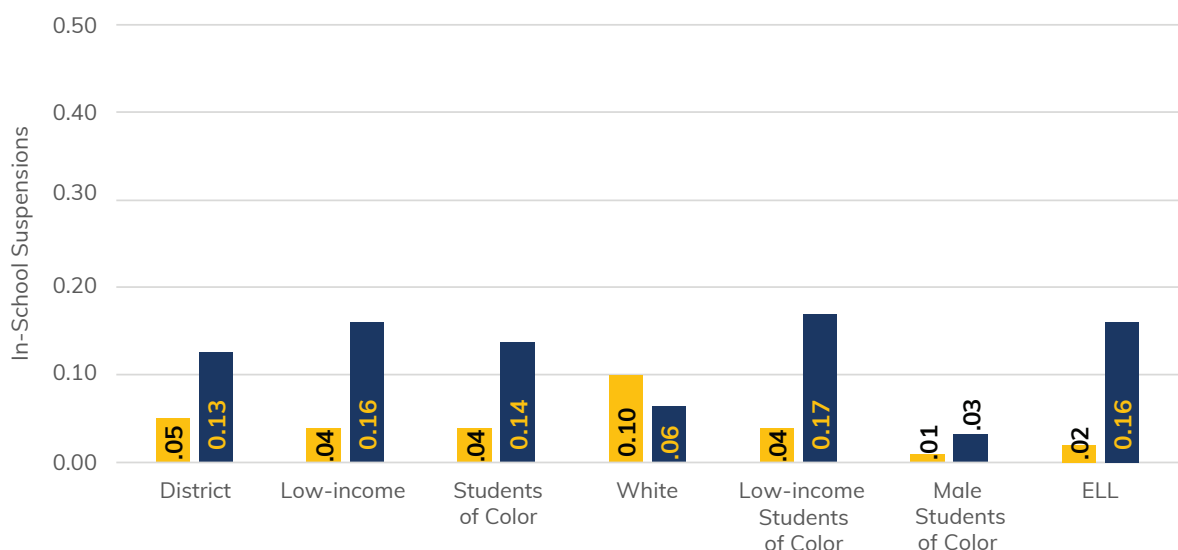
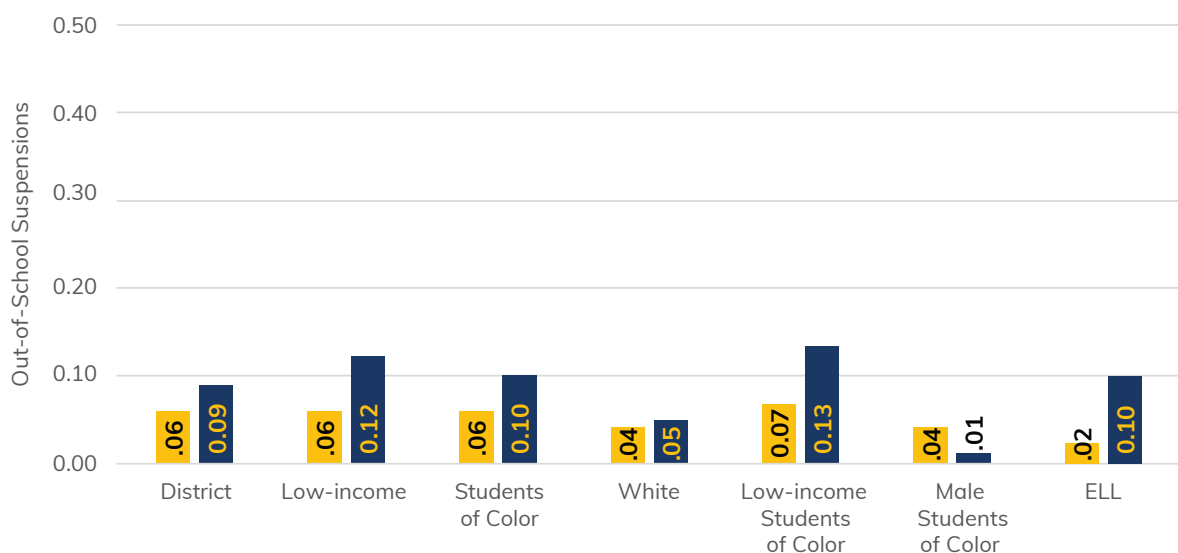


FIGURE 52: 2017 NINTH GRADE OUT-OF-SCHOOL SUSPENSIONS BY AVID PARTICIPATION



Legend



AVID



COMPARISON
GROUP

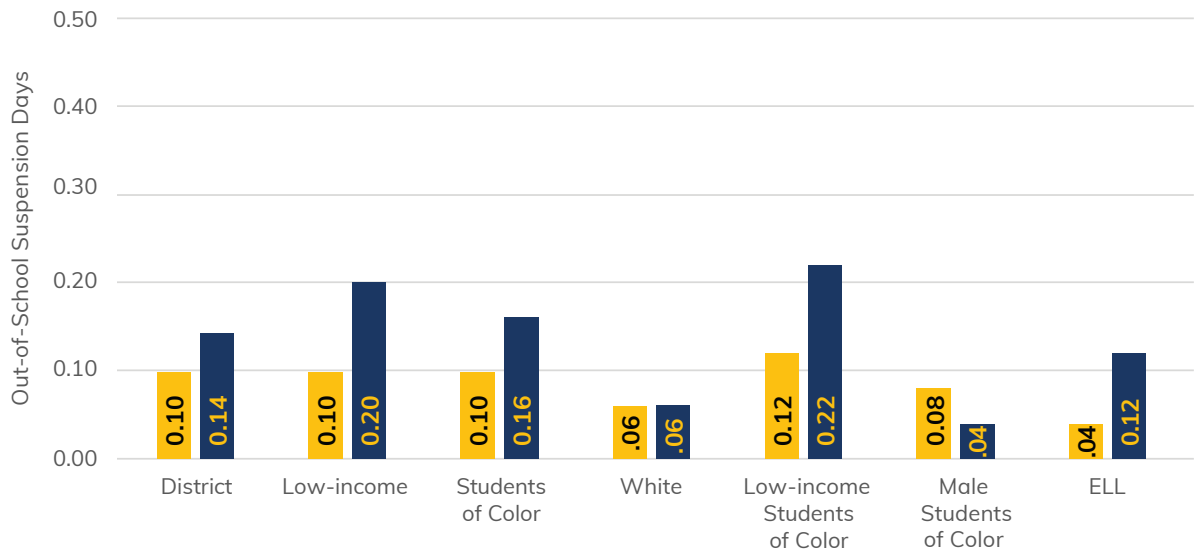


DIFFERENCE IS
STATISTICALLY
SIGNIFICANT
AT THE 90%
LEVEL



DIFFERENCE IS
STATISTICALLY
SIGNIFICANT
AT THE 95%
LEVEL

FIGURE 53: 2017 NINTH GRADE OUT-OF-SCHOOL SUSPENSION DAYS BY AVID PARTICIPATION



Legend



AVID

COMPARISON
GROUPDIFFERENCE IS
STATISTICALLY
SIGNIFICANT
AT THE 90%
LEVELDIFFERENCE IS
STATISTICALLY
SIGNIFICANT
AT THE 95%
LEVEL

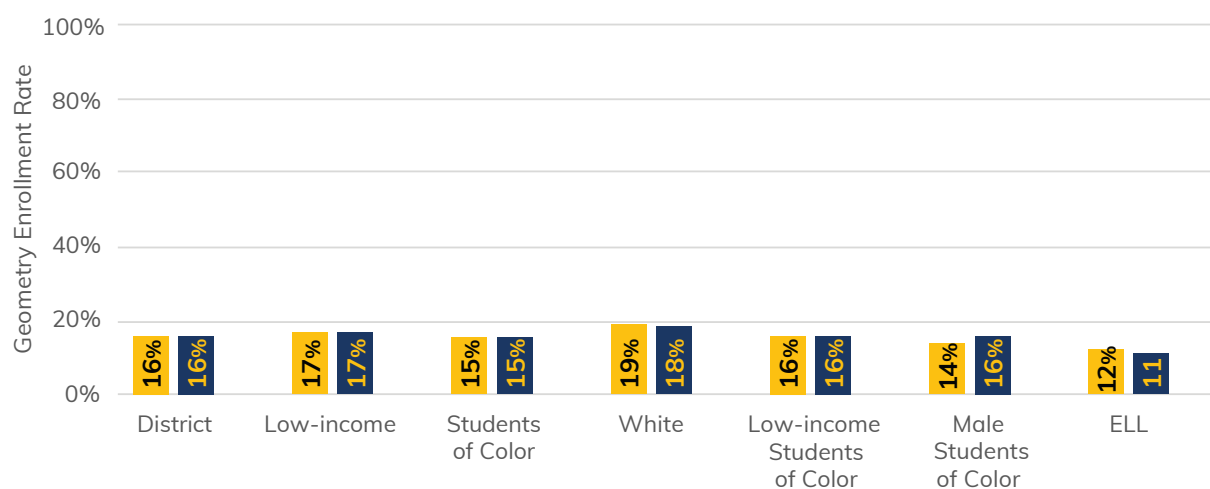
Impact: Ninth-Grade Geometry Enrollment (2017)

We find that students who were in middle school AVID had similar geometry enrollment rates in the ninth grade when compared

to their non-AVID peers (Figure 54).¹³ These results were similar across all subgroups.

2017 Cohort Key Finding: Students who were in middle school AVID had similar geometry enrollment in ninth grade compared to their peers.

FIGURE 54: 2017 NINTH GRADE GEOMETRY ENROLLMENT BY AVID PARTICIPATION



¹³AVID participant and comparison groups are limited to students who were in the regular math sequence in sixth grade. This excludes students who took seventh grade math, eighth grade math, or any high school level math courses in sixth grade.

Legend



AVID

COMPARISON
GROUPDIFFERENCE IS
STATISTICALLY
SIGNIFICANT
AT THE 90%
LEVELDIFFERENCE IS
STATISTICALLY
SIGNIFICANT
AT THE 95%
LEVEL

Impact: Ninth-Grade ASPIRE Scores (2017)

AVID middle school participants earned similar scores on the ninth grade ASPIRE math and reading tests as compared to their matched peers. The effect at the district level amounted to approximately 0.04 points on the test's unstandardized scale in math (Figure 55) and 0.7 points in reading (Figure 56). For many subgroups, the effect was similar. Among White

students however, AVID participants scored significantly higher on the ASPIRE reading than their matched counterparts by approximately 2.3 points.

2017 Cohort Key Finding: Students who were in middle school AVID scored similarly to their peers on the ninth grade ASPIRE math and reading tests.

FIGURE 55: 2017 NINTH GRADE ASPIRE MATH BY AVID PARTICIPATION

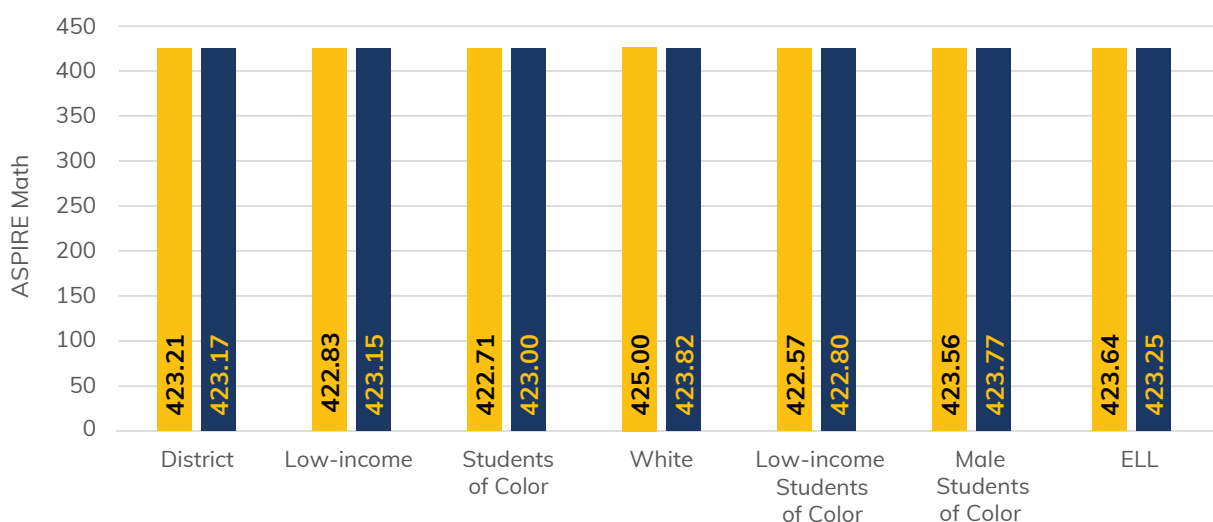
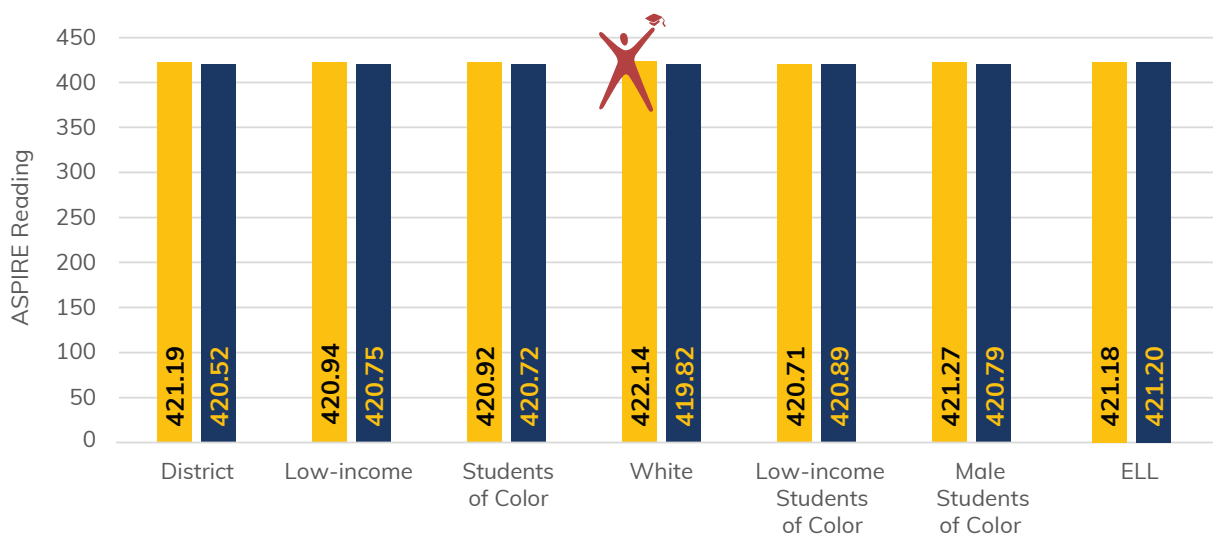


FIGURE 56: 2017 NINTH GRADE ASPIRE READING BY AVID PARTICIPATION



Ninth-Grade Impacts by High School Feeder Pattern (2017)

Our examination of AVID ninth grade impacts by high school feeder pattern revealed that district-level analyses obscured some important variation in effects (Table 7). In particular, we found that program effects on ninth grade attendance appeared to vary by feeder pattern. The strongest effects were observed among students from middle schools feeding into East High School. Further, we found that the positive and significant average program impacts on ninth grade credit accumulation occurred among students coming from middle schools feeding into East High School.

This was true only in terms of earned credits and not in terms of failed courses. There were also differences found in impact on ASPIRE scores. For students from middle schools feeding into Memorial High School, we found positive and significant effects on ninth grade ASPIRE scores in both math and reading.

2017 Cohort Key Finding: AVID student gains in ninth grade attendance, earned credits, and ASPIRE scores differed considerably between high school feeder patterns.

TABLE 7: 2017 NINTH GRADE IMPACTS BY HIGH SCHOOL FEEDER PATTERN

| Outcome | East Schools | | La Follette Schools | | Memorial Schools | | West Schools | |
|-------------------------------|--------------|-------------|---------------------|--------|------------------|---------------|--------------|--------|
| | AVID | Comp. | AVID | Comp. | AVID | Comp. | AVID | Comp. |
| Cumulative GPA | 2.71 | 2.75 | 2.84 | 2.95 | 2.65 | 2.58 | 2.58 | 2.56 |
| Core GPA | 2.56 | 2.60 | 2.67 | 2.84 | 2.47 | 2.44 | 2.39 | 2.47 |
| Unexcused Absent Days | 2.55 | 8.38 | 1.29 | 2.39 | 1.24 | 1.85 | 2.98 | 3.41 |
| Attendance Rate | 96% | 92% | 96% | 96% | 97% | 96% | 95% | 94% |
| Earned Credits | 6.55 | 6.01 | 7.20 | 7.20 | 6.26 | 6.17 | 6.36 | 6.18 |
| Failed Courses | 0.55 | 1.29 | 0.89 | 0.82 | 0.58 | 0.71 | 1.31 | 1.41 |
| In-School Suspensions | 0.02 | 0.28 | 0.20 | 0.15 | 0.00 | 0.04 | 0.02 | 0.01 |
| Out-of-School Suspensions | 0.04 | 0.18 | 0.19 | 0.12 | 0.00 | 0.04 | 0.02 | 0.01 |
| Out-of-School Suspension Days | 0.06 | 0.26 | 0.33 | 0.24 | 0.00 | 0.06 | 0.03 | 0.03 |
| Geometry Enrollment | 0.29 | 0.21 | 0.18 | 0.27 | 0.02 | 0.00 | 0.11 | 0.14 |
| ASPIRE Math | 422.03 | 422.60 | 423.42 | 425.12 | 424.68 | 422.35 | 422.08 | 422.59 |
| ASPIRE Reading | 420.03 | 419.69 | 421.67 | 421.21 | 422.06 | 419.33 | 420.97 | 423.30 |

Note: Bold indicates statistically significant difference ($p < .05$)

Summary

The results presented in this evaluation indicate that AVID participation leads to small positive gains in eighth grade academic performance and a small reduction in eighth grade out-of-school suspensions. Over the course of the past five years of program implementation, AVID eighth graders have earned significantly higher average GPAs than comparable non-participants—a difference of 0.04 grade points. They have also been less likely to receive out-of-school suspensions. These findings persist across subgroups of interest and are somewhat stronger for low-income students and students of color.

The results also indicate that participation in AVID during the eighth grade helps students get on track

academically for ninth grade. Across the past four years, students who participated in AVID earned higher ninth grade GPAs than similar peers by approximately 0.08 grade points. They were also more likely to earn more credits and fail fewer courses on average than similar peers who did not participate in the middle school AVID program. Limiting analyses to the 2017 sample, these impacts were not always large enough to reach statistical significance. However, when we estimated aggregate program impacts over the past four years, we found them to be highly significant, suggesting that the middle school AVID program has had a net positive effect on the ninth grade academic success of participants during its' existence.

The Wisconsin HOPE Lab Mission

The Wisconsin HOPE Lab was established in 2013 by Dr. Sara Goldrick-Rab on the University of Wisconsin–Madison campus to engage in translational research aimed at improving equitable

outcomes in postsecondary education. The Lab is housed in the School of Education and is led by Acting Director Dr. Jed Richardson. For more information, see www.wihopelab.com.



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L139 Education Building, 1000 Bascom Mall, Madison, WI 53706-1326
School of Education, University of Wisconsin-Madison
avid.org | www.wihopelab.org | wiscapewisc.edu