



Closing Advanced Coursework Equity Gaps for All Students

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Introduction and summary

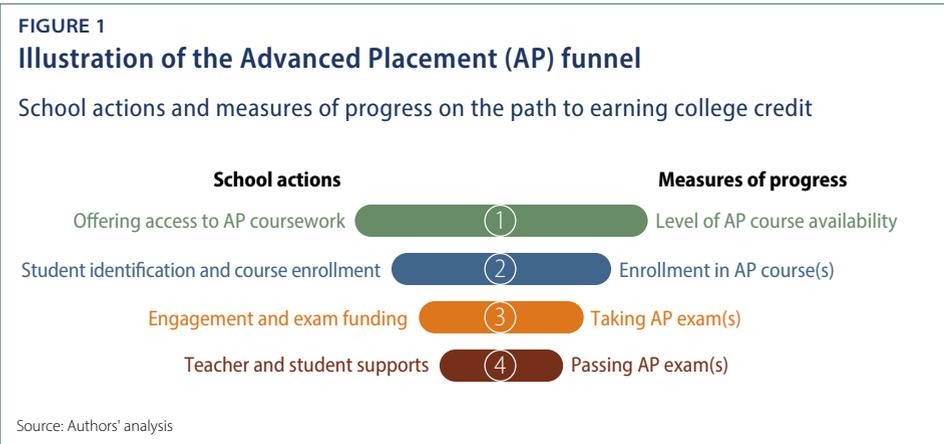
Advanced coursework opportunities provide high school students with the chance, in theory, to earn college credit while they are still in high school.¹ Common examples of advanced coursework opportunities include Advanced Placement (AP) courses, dual or concurrent enrollment in classes that count for both high school and college credit, and International Baccalaureate (IB) courses and early college high school models.² It is important to note that passing advanced coursework examinations simply makes students eligible to earn college credit. The institution of higher education where a student plans to enroll ultimately makes the final decision on whether it will award credit to students.³

The value of advanced coursework opportunities, however, is not only tied to their ability to provide potential college credit. Due to the increased rigor and high expectations of these courses, advanced coursework offers high schoolers valuable opportunities to gain skills and demonstrate competencies in the kinds of learning they can expect to see in postsecondary education. However, the opportunity gaps in the advanced coursework system—the inequitable distribution of funding, supports, and pathways for student participation and success—have a profound impact on which students are enrolling and succeeding in advanced coursework opportunities.

However, no national data set exists to show how all students are doing in different types of advanced coursework. Due to that limitation, this report examines the patterns of which high school students are enrolling and succeeding in AP classes based on the availability of AP courses offered at their schools. National data from the Civil Rights Data Collection show that students who are Black, Indigenous, and other non-Black people of color (BIPOC) are not enrolled in AP courses at rates comparable to their white and Asian peers and experience less success when they are—and the analysis for this report finds this to be true even when they attend schools with similar levels of AP course availability. Additionally, the enrollment and success gaps in AP courses for these students either persist or become even more pronounced in schools that are offering high numbers of AP courses.

This report’s analysis also highlights a variety of strategies and layers of support that states and districts across the country are employing to improve equity gaps for high school students in AP participation and performance. Strategies include removing biases and barriers in the identification of students for and the enrollment of them in AP classes, providing professional development for educators to expand AP offerings, coordinating vertically across grade levels to better prepare students for advanced coursework before they get to high school, waiving test fees for students to take AP exams, and creating peer learning communities for teachers and students during the school year to support their teaching and learning. These strategies are by no means exclusive to AP coursework and should be applied across the board to improve the overall rigor of high school curricula and coursework. This is important because high schools should not rely on simply getting more students into courses designated as advanced, as this can often function as a tracking mechanism. Rather, high schools should aspire to improve the rigor of all coursework to the level of AP and IB classes to ensure that all students are learning relevant and engaging material that prepares them for college and their careers.

In examining how students are participating and performing in AP coursework, one way to illustrate the student path to success is with a funnel that has different phases. While this funnel concept could be applied to other forms of advanced coursework, the illustration in Figure 1 can be broken down into the following stages of AP coursework: the level of AP course availability for a high school student; the likelihood of a student’s enrollment in an AP course; the likelihood of a student taking an AP test; and the likelihood of a student earning a passing score on an AP exam.



It is worth noting that the size and shape of this funnel will differ across states, school districts, schools, and for different subgroups of students. Using nationwide data from the U.S. Department of Education’s 2015-16 Civil Rights Data Collection (CRDC), the most recent year in which the information was collected, Table 1 illustrates the outcome of 1,000 public high school students in grades 9 through 12 if they were to progress through the AP funnel. Successive rows show how many students overall and in specific racial and ethnic subgroups would end up enrolling in an AP class, taking an AP test, and then passing an AP test. For example, for every 1,000 high school students in grades 9 through 12, 174 students would enroll in an AP course, 130 would take an AP test, and 75 would pass an AP exam. Both the funnel and the authors’ analysis focus on AP because it is the largest mechanism across the country for high school students to take advanced coursework. In addition, analyzing AP data allows for easier comparisons across states because the rules for test scoring are more consistent across the country.⁴

TABLE 1
The national Advanced Placement (AP) credit funnel, per every 1,000 public high school students

Estimation of how many students would enroll in an AP course, take an AP test, and pass an AP test per every 1,000 high school students, overall and disaggregated, during the 2015-16 school year

For every 1,000 high school students...	All students	White students	Black students	Hispanic students	Asian students	American Indian or Alaska Native students
___ would enroll in an AP course	174	185	105	156	375	93
___ would take an AP test	130	139	73	111	313	59
___ would pass an AP test	75	90	21	51	215	7

Sources: Authors’ calculations based on U.S. Department of Education’s Civil Rights Data Collection, “Detailed Data Tables, 2015 survey,” available at <https://ocrdata.ed.gov/flex/Reports.aspx?type=school> (last accessed April 2021). For more information on the source and the authors’ methodology, see Roby Chatterji, Neil Campbell, and Abby Quirk, “Closing Advanced Coursework Equity Gaps for All Students” (Washington: Center for American Progress, 2021), available at <https://www.americanprogress.org/?p=500759>.

As Table 1 illustrates, there are significant opportunity gaps at each stage of the funnel that permeate the ecosystem of AP coursework. In part, these opportunity gaps stem from gaps in access to AP courses—and the authors’ analysis of CRDC data illustrated that Black and Indigenous students, as well as students attending schools in rural areas, had significantly less access to AP coursework than their peers. The authors grouped high schools across the country into four categories based on the number of AP courses they offered and the size of the student body. The resulting groups represent the varying degrees of access to AP coursework for high school students. (see the Methodology text box below and the Appendix for more details)

The opportunity gaps existed even among students who had similar levels of access to advanced coursework, and in some cases, they grew even more pronounced. For instance, even in high schools that offered 18 or more AP courses, there were significant gaps in the rates at which Black, Latinx, and Indigenous students were enrolled in AP courses, took AP tests, and received passing scores on the exams compared with students overall and their white and Asian peers. However, there are actions that schools, districts, and state policymakers can leverage to affect different “leaky points” in their respective funnels—in other words, to help close opportunity gaps.

The value of advanced coursework

The challenging material and rigor of advanced coursework is linked to a number of benefits for high school students. In one quasi-experimental study, enrollment in advanced coursework was shown to improve student self-esteem,⁵ and other studies have shown that students enrolled in advanced courses tend to be more engaged in their studies and have fewer absences and suspensions.⁶ While all students should have engaging courses, narrowing opportunity gaps in rigorous advanced coursework could benefit more students. The ability to earn college credit in high school can also offer students more flexibility and potential cost savings in their studies beyond high school.⁷ One study found a linkage between AP credits and a shorter time to a college degree, as well as increased likelihood of college students double majoring and taking advanced math and laboratory science college coursework.⁸ It even found students who entered college with approximately 10 hours of AP credit had \$1,000 less debt on average—in many cases because their accumulated credits allowed them to start college at a higher standing—which can be important given the higher student loan debt burdens Black students face.⁹

Research also suggests that high school students who enroll in advanced coursework opportunities are more likely to graduate, go on to college, and earn a degree.¹⁰ The benefits of advanced coursework opportunities are not limited to one particular model: Students enrolled in these classes have shown significant measures of post-secondary success compared with students who do not take these kinds of courses, regardless of whether they are AP classes,¹¹ IB classes,¹² or dual enrollment programs.¹³ This holds true for a variety of student subgroups as well.

Research on Advanced Placement

While there are a number of ways that high school students can participate in advanced coursework, the authors' analysis in this report focused on participation and performance in AP coursework because it is the largest mechanism across the country for high school students to take advanced coursework and because there are data available on student outcomes.¹⁴ Analyzing AP data also allows for easier comparisons across states, as the rules for test scoring are more consistent across the country.

There is a large body of research on the correlations between student participation in AP classes in high school and their academic outcomes both during and after high school. Comparison studies examining the academic performance of AP vs. non-AP students show a positive correlation between participation in AP coursework and higher standardized test scores, higher college attendance rates, higher college grades, reduction in college dropout rates, higher likelihood of majoring in a field related to their AP coursework, and higher college graduation rates. Students also have more favorable attitudes toward the academic material covered in their AP courses.¹⁵

It is worth noting that much of this research has come from the College Board—the organization that runs and operates the AP program. Additional research has been conducted in recent years that takes a more critical look at the potential benefits of the AP program. A common critique of existing research on the AP program is that AP course enrollment is merely a proxy for student ability and motivation; therefore, the college success attributed to AP course-taking may actually be because of the caliber of students who opt to take them.¹⁶ An extension of this argument is that participation and success in the AP program are the results of nonrandom processes and that AP students and non-AP students differ from one another in many ways—including that AP students tend to be from higher-income families, attend suburban schools, and have better academic preparation for high school than non-AP students.¹⁷ Subsequently, there has been emphasis on research that goes beyond simple comparisons between AP students and non-AP students as well as research that controls for confounding variables.

A research study from 2010 tried to account for some of these factors and used specific criteria, including high school rank and SAT scores, to categorize students into groups so that students with similar abilities could be compared. The results showed that regardless of ethnicity, gender, class rank, or SAT score, students with AP credits earned higher first-semester college grade point averages (GPAs) than their counterparts with similar high school academic characteristics but no AP credit.¹⁸ A number of independent and external research studies have also been published in recent years with findings about AP student outcomes that are similar to the findings promulgated by the College Board. One study found that AP students outperform their non-AP peers on college entrance exams such as the ACT.¹⁹ Another study indicated that increasing numbers of AP-based course credits for students was associated with higher GPAs beyond their first year of college and a substantially higher graduation rate.²⁰ Additionally, research found that participation in AP English courses was associated with stronger writing ability in college²¹ and that there was a positive association between AP participation and higher rates of

obtaining advanced degrees and future income.²² It is also worth noting that various research studies have shown that while the correlation between AP participation and college outcomes exists after controlling for demographic variables, the association is much stronger across all demographic groups for students who pass an AP test.²³

Dynamics surrounding AP and advanced coursework

The AP program and corresponding examinations are part of a broader landscape, and there are competing dynamics around how college institutions award college credit. On one side are universities that have engaged in efforts to diminish the role of a student's AP scores in awarding college credit; a 2016 study found that 86 percent of the nation's top 153 universities restrict the awarding of AP credit in some form or fashion.²⁴ Some schools do not give course credit for any AP courses and scores, while others restrict the number of subject areas that are eligible for course credit, increase the minimum score needed to earn credit, or cap the total amount of credit a student can receive.²⁵ In addition to those tensions, pandemic-related changes to AP exams²⁶ are having an impact on what some colleges and universities will recognize for credit.²⁷ Credit recognition can also be a challenge for students who complete dual enrollment courses, in large part due to the fact that there are no national standards of quality for dual enrollment classes like there are for AP courses. This is even more challenging when students are seeking credit at an institution other than the initial one that awarded the credit.²⁸

At the same time, there are states with policies to make it easier for students to receive credit for successful completion of advanced coursework during high school. In the case of AP exams—which are graded on a point scale ranging from 1 to 5—students who receive a score of 3 or higher often become eligible to receive college credit or place out of certain college courses.²⁹ A 2015 Texas law requires the state's public colleges and universities to give credit for scores of 3 or higher on AP exams, with very limited exceptions.³⁰ Likewise, Illinois passed legislation in 2015 requiring the state's higher education institutions to award credit for scores of 3 or higher on AP exams.³¹ Tennessee has also developed a set of dual credit classes that are recognized statewide for high school students, and if a student meets or exceeds the cut score on the corresponding examination, they receive college credit that can be applied to any Tennessee public postsecondary institution.³²

These dynamics related to AP and advanced coursework are playing out at the same time many colleges are reevaluating their stances on using standardized tests such as the ACT or the SAT (the latter of which is also operated by the College Board)

for admissions purposes—a trend accelerated by the pandemic due to complications in the testing process this past year.³³ In fact, for students applying for college admission in fall 2021, more than two-thirds of four-year colleges and universities in the United States—including nearly all of the nation’s most selective universities and liberal arts colleges—will not require applicants to submit ACT or SAT scores.³⁴ These kinds of policies do not appear to be temporary, as the University of California (UC) system, one of the largest university systems in the country, has decided to phase out the use of standardized college admission exams through 2024 and then eliminate the use of SAT and ACT exams altogether beginning in 2025—a potential harbinger of change to come in the college admissions universe.³⁵

Historically, enrollment in advanced coursework opportunities can have a positive impact on students as it relates to college admissions decisions. In a 2018 survey conducted by the National Association for College Admission Counseling, the top two factors cited in admission decisions were students’ overall high school GPA and grades in college preparatory courses, followed by admission test scores and the strength of curricula.³⁶ Additionally, many high schools weight AP courses and other forms of advanced coursework more heavily in calculating students’ GPAs. Participation in advanced coursework, therefore, has the potential to boost students’ GPAs and therefore their chances of college admission.³⁷ Without the use of tests such as the SAT and ACT, the role of student enrollment and success in advanced coursework could gain even more significance for college admissions purposes, as high school students may look for a way to stand out or gain a competitive edge through AP or other advanced courses. Yet ultimately, it is not yet clear how important student participation and performance in advanced coursework will be in future admissions cycles if the role of standardized test scores is diminished.

Looking beyond access: The Advanced Placement funnel

There are significant opportunity gaps among students in access to advanced coursework, and those gaps widen when examining which high school students are enrolling and succeeding in advanced coursework. A longitudinal study from the National Center for Education Statistics (NCES) also shows that the gaps among which students are earning college credit are not limited to AP courses but also include International Baccalaureate and dual enrollment classes.³⁸

The authors sought to better understand these gaps using disaggregated school-level data from the 2015-16 Civil Rights Data Collection on AP course offerings, AP course enrollment, and test passage rates of high school students in AP coursework. AP courses are not the only model of advanced coursework available to students, but they are the largest mechanism by which students earn college credit while in high school.³⁹ In addition to the large scale of the program, the common nationwide scoring of AP tests allows for comparisons across all 50 states and Washington, D.C.

The successful endpoint for high school students taking AP courses comes when they pass AP exams. One way to illustrate that path is a funnel with four different stages—the level of AP course availability a high school student has, the likelihood of a student’s enrollment in an AP course, the likelihood of a student taking an AP test, and the likelihood of a student earning a passing score on an AP exam.

These funnels will look different—some will be skinnier and some will be wider—across states and districts depending on whether and where students fall out of the funnel on the path to earning a qualifying score for potential college credit. This analysis seeks to understand what these funnels look like across the country and for high school students across racial and ethnic subgroups. Additionally, for states and districts looking to address different points of the funnel for different student subgroups, there may be different strategies and methods to target each stage of the funnel.

Methodology

In order to understand these funnels for students across the country, the authors relied on data from the U.S. Department of Education's 2015-16 Civil Rights Data Collection. This survey of nearly all public schools and school districts in the country included information for each public high school (grades 9 to 12) on school enrollment demographics; the number of AP courses offered; and counts of how many students enrolled in an AP course, took an AP test, and passed an AP test, disaggregated by racial and ethnic subgroups.⁴⁰ Disaggregated data on student subgroups related to socioeconomic status were not captured in the data set.

The authors linked school locale data to the CRDC from the Education Demographics and Geographic Estimates (EDGE)—a program under the Institute of Education Sciences' NCES.⁴¹ These data allowed the authors to categorize schools based on the communities in which they

are located and examine student enrollment data based on school location, whether in a rural area, town, suburban area, or city. These designations are based on population thresholds, which are further explained in the Appendix.

Using the reported data from all public high schools in the country, the authors grouped high schools into four categories based on the number of AP courses they offered, forming groups that included similar numbers of students. The resulting groups represent the varying degrees of access that high school students have to AP coursework. This level of detail and depth on AP data, including student outcomes, was not collected in the 2017-18 CRDC. Additionally, the CRDC data from 2015 to 2016 only capture what AP courses were physically offered at schools and not students who may have enrolled in virtual AP courses even if their school did not offer any.

Access is the first potential barrier to advanced coursework

The fact that all students do not have similar levels of access to AP courses illustrates that the first gap in the student pathway to enrolling and succeeding in AP courses is one of access. In order to understand the level of access to AP courses that students encounter nationwide, the authors created four groups of high schools based on how many AP courses each school offered. These groups enrolled from 23.3 percent to 26.1 percent of the nation's high school students. There is a clear relationship between school size and AP course offerings, as schools in the first group offering 0 to 3 AP courses averaged an enrollment of 273 students, while schools in the fourth group offering more than 18 AP courses averaged 1,854 students. (see Table 2)

While each group includes roughly 25 percent of the nation's high school students, the distribution of student enrollment across these groups varies widely across states. In Virginia, for example, 73 percent of students attended schools offering 11 or more AP courses, while 86 percent of students in Mississippi attended high schools offering 10 or fewer courses.

TABLE 2

National groupings of schools based on Advanced Placement (AP) course offerings

Student count, school count, and percentage of national public high school enrollment per range of AP course offerings during 2015-16 school year

Range of AP courses offered	Student count	School count	Percentage of total national enrollment
0-3	3,722,956	13,625	23.3%
4-10	3,940,295	4,895	24.6%
11-17	4,151,924	2,981	26.0%
18-37	4,176,040	2,253	26.1%
Total	15,991,215	23,754	100.0%

Sources: Authors' calculations based on U.S. Department of Education's Civil Rights Data Collection, "Detailed Data Tables, 2015 survey," available at <https://ocrdata.ed.gov/flex/Reports.aspx?type=school> (last accessed April 2021). For more information on the source and the authors' methodology, see Roby Chatterji, Neil Campbell, and Abby Quirk, "Closing Advanced Coursework Equity Gaps for All Students" (Washington: Center for American Progress, 2021), available at <https://www.americanprogress.org/?p=500759>.

In addition to differences across states, the CRDC data enabled the authors to analyze disaggregated data to understand the distribution of enrollment in each of the four groups of high schools created for students across racial and ethnic subgroups, as well as the urbanicity of the high school they attended.

Significant gaps exist in access to AP across racial and ethnic subgroups and geographies

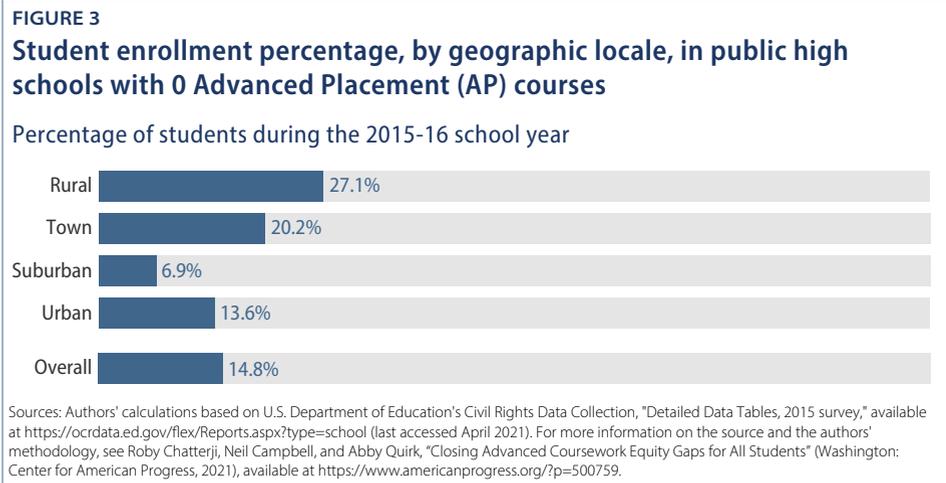
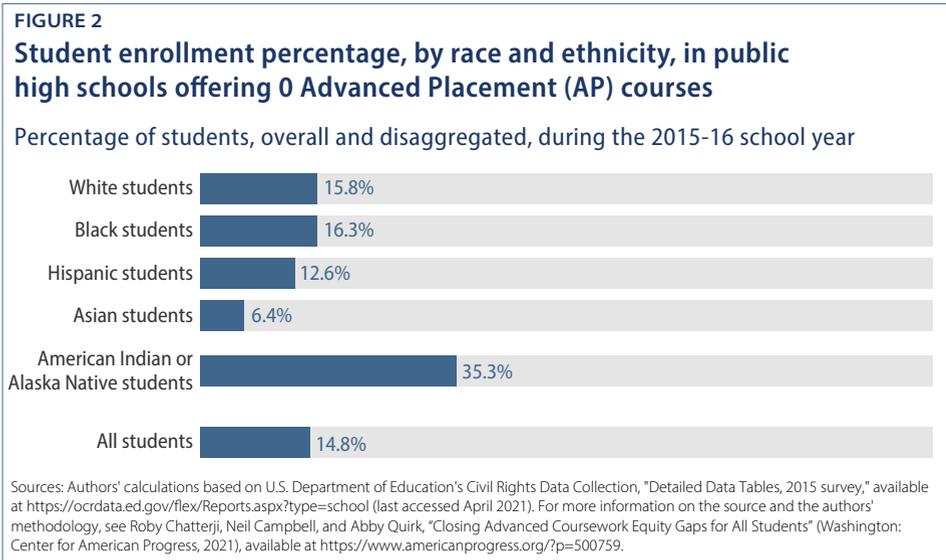
The AP coursework access gap was most glaring for the nearly 2.4 million students—nearly 15 percent of high school students—who attended schools that did not offer any AP coursework. These students represented more than 60 percent of the enrollment in the group of schools offering 0 to 3 AP courses.

Indigenous students and those attending rural high schools were most likely to attend schools offering no AP courses

While Table 3 shows that white students (15.8 percent) and Black students (16.3 percent) were slightly more likely than the overall national average (14.8 percent) to be enrolled in high schools that did not offer any AP classes, Indigenous students (35.3 percent) across the country were more than twice as likely as any other racial or ethnic group to attend high schools not offering any AP classes.

There are some states that do not follow the national trends. For example, while 6.4 percent of Asian students were enrolled in schools offering zero AP courses at the national level, 19.6 percent of Asian high school students in Minnesota attended high schools offering zero AP courses—more than three times the national average.

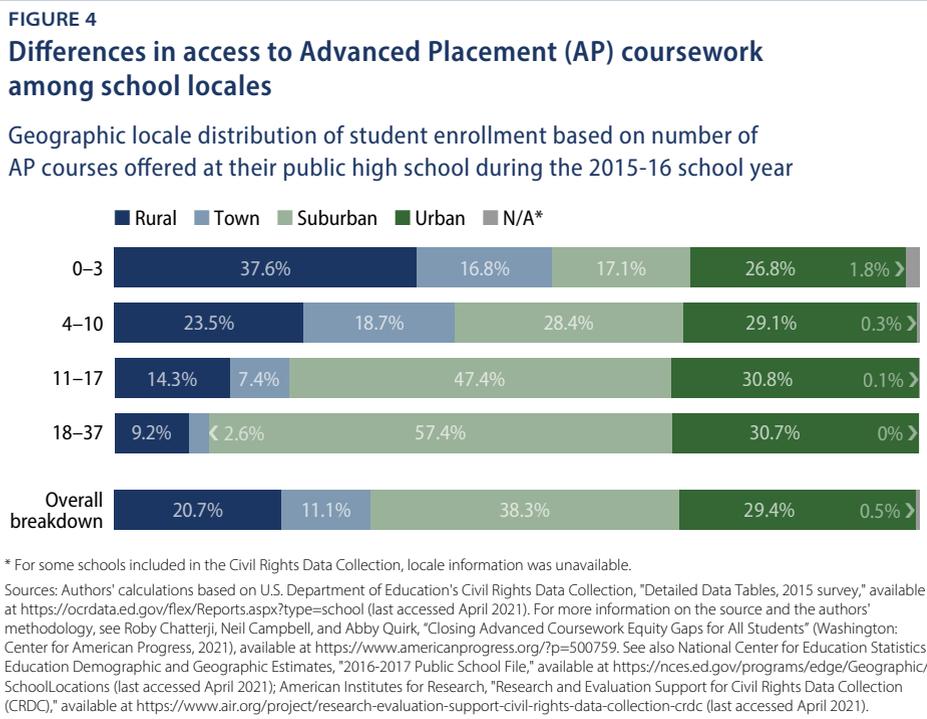
However, about 50 percent of Minnesota’s Asian population are Southeast Asian Americans who are refugees or descendants of refugees from Cambodia, Laos, Myanmar, and Vietnam—which includes the 31 percent of Minnesota’s Asian population who identify as Hmong.⁴² In many cases, these subpopulations have different needs and challenges than the broadly defined Asian student population, highlighting the need for better disaggregation of Asian student data to help identify and surface disparities occurring among ethnicities within racial subgroups.⁴³



Students attending high schools in areas categorized as “rural” or “town” were substantially more likely to attend high schools offering zero AP courses, while comparatively few suburban students attended schools not offering AP courses. (see Figure 3)

Students attending rural and town high schools were overrepresented in schools offering fewest AP courses

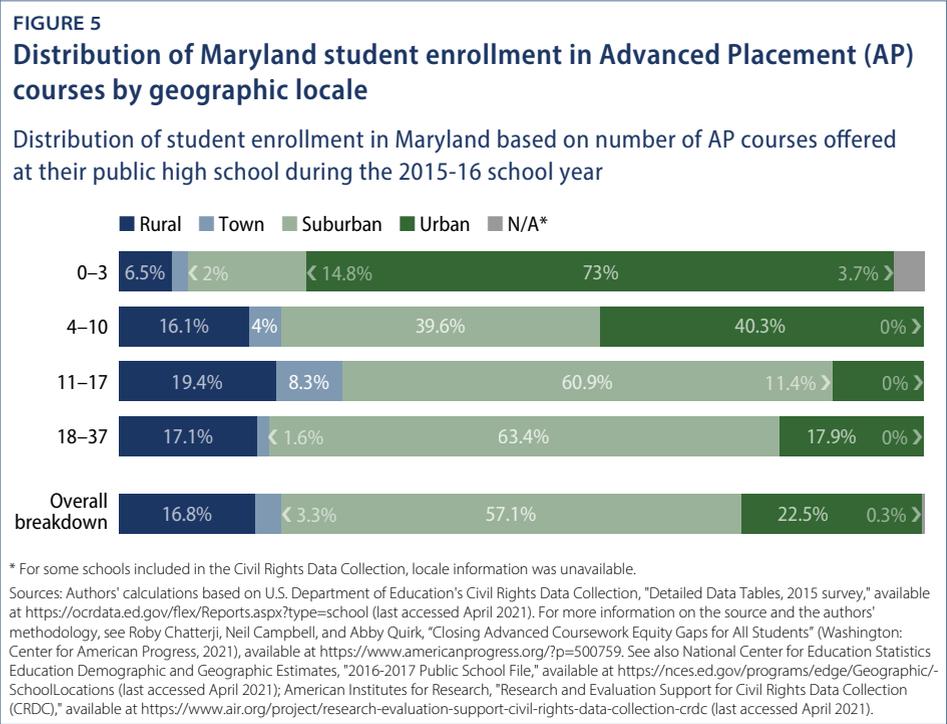
The geographic breakdown of student enrollment across the four groups shows that students attending school in rural areas and towns were less likely to attend a school with a high degree of access to AP coursework. (see Figure 4) While 20.7 percent of high school students nationwide attended a school in a rural area, 37.6 percent of students enrolled in schools offering 0 to 3 AP courses attended schools in a rural area. Students from high schools in towns were also significantly overrepresented as a share of enrollment in schools offering 0 to 10 AP courses.



Student enrollment in schools with more access to AP coursework—schools offering 11 to 37 AP courses—was skewed dramatically toward suburban areas, while students attending urban high schools were distributed relatively evenly across all four groups of schools.

The average distribution of students enrolled in schools with access to fewer AP courses masked meaningful differences across states. While students attending rural high schools across the country were concentrated in schools with less access to AP coursework, that was not the case in Maryland. (see Figure 5) Students attending Maryland's urban high schools represented nearly 76 percent of all students attending high schools offering 0 to 3 AP courses, while students attending Maryland's rural high

schools were underrepresented in high schools offering 0 to 3 AP courses (6.8 percent compared with 16.8 percent overall). It is likely that inequitable resource distribution and lack of investment in urban schools in Maryland—which are predominantly attended by BIPOC students and concentrated in Baltimore City Public Schools and Prince George’s County Public Schools—is contributing to this phenomenon.⁴⁴



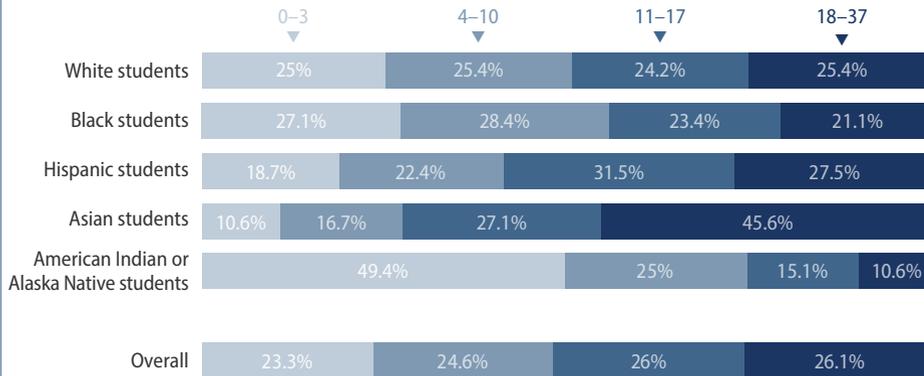
Black and Indigenous students are underrepresented in schools with more access to AP coursework

The national distribution of student enrollment across these school groups by student racial and ethnic subgroups illustrates a number of access gaps. Black and Indigenous high school students are overrepresented in schools with less access to AP courses and underrepresented in schools with higher levels of access to AP coursework. This is particularly true for Indigenous high school students—more than 49 percent of all Indigenous high school students in the country attended a school with three or fewer AP courses, compared with 23 percent of students overall. (see Figure 6)

FIGURE 6

National differences in access to Advanced Placement (AP) coursework among student racial and ethnic subgroups

Enrollment distribution of public high school students, overall and disaggregated, based on number of AP courses offered during the 2015-16 school year

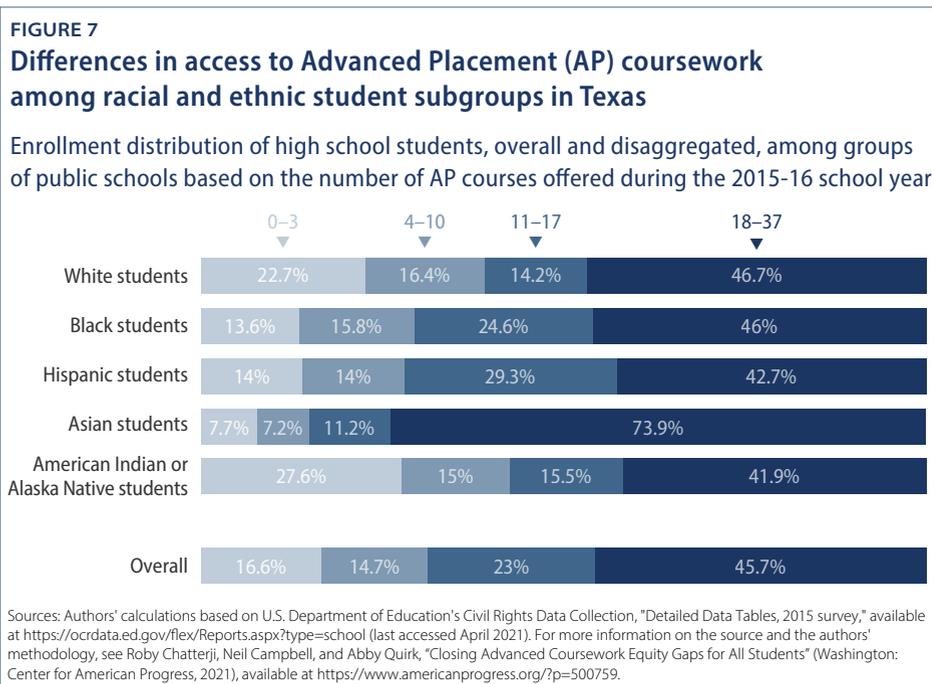


Sources: Authors' calculations based on U.S. Department of Education's Civil Rights Data Collection, "Detailed Data Tables, 2015 survey," available at <https://ocrdata.ed.gov/flex/Reports.aspx?type=school> (last accessed April 2021). For more information on the source and the authors' methodology, see Roby Chatterji, Neil Campbell, and Abby Quirk, "Closing Advanced Coursework Equity Gaps for All Students" (Washington: Center for American Progress, 2021), available at <https://www.americanprogress.org/?p=500759>.

The distribution of enrollment of white students is fairly consistent across the four groups of high schools created, but they are slightly overrepresented in schools offering 0 to 10 AP courses and slightly underrepresented in schools offering 11 to 37 AP courses. At the national level, Asian and Latinx students are overrepresented in schools with high levels of AP course offerings. Nearly 73 percent of Asian students, versus 52 percent overall, attended schools offering 11 to 37 AP courses, with almost 46 percent of Asian students attending schools offering 18 to 37 AP courses. Latinx students were also more likely to be enrolled in schools offering 11 to 37 AP courses—59 percent compared with 52 percent overall—but the distribution was not similarly skewed toward schools offering 18 to 37 AP courses, as was the case for Asian students. It is not the case in all states, but on a national level, Latinx students are not experiencing the same level of gaps in access to AP coursework as Black and Indigenous students.

Equitable access to AP courses varies across states

Despite these national trends in high school students' access to AP coursework, there are some states where Indigenous and Black students did not experience similar gaps in AP course offerings.



As shown in Figure 7, Black (70.6 percent) and Latinx (72.0 percent) students in Texas were overrepresented as a share of enrollment in schools offering 11 to 37 AP courses (68.7 percent of students overall). Indigenous students (57.4 percent) are modestly underrepresented in Texas schools offering 11 to 37 AP courses. However, Indigenous students in Texas have much greater AP course access in schools offering 11 to 37 AP courses compared with nationwide numbers: Only 25.7 percent of Indigenous students are enrolled in such schools nationwide.

Still, attending a school offering AP coursework is only the first step in creating equitable access to opportunities. Further down the funnel, there are chances for inequity to creep in through AP course enrollment, test taking, and test passage rates.

Gaps in AP course enrollment for Black, Latinx, and Indigenous students grow as level of access to AP coursework grows

The next step in this analysis was to examine participation rates for high school students in AP coursework. By examining AP course enrollment rates across the four groups of high schools and across racial and ethnic subgroups in those groups, it is

clear that the gaps in access for Black and Indigenous students are amplified by gaps in the rates at which these students are enrolled in AP courses. For example, while high schools offering 4 to 10 AP courses enrolled 13.7 percent of students overall in at least one AP course, only 9.9 percent of Black students in high schools offering 4 to 10 AP courses were enrolled in at least one AP course. (see Table 3)

While there were not gaps in AP course offerings for Latinx students, Latinx students in each group of schools were less likely to enroll in at least one AP course than their white and Asian peers.

TABLE 3
National Advanced Placement (AP) course enrollment rates among public high school students

Distribution of high school students enrolled in at least 1 AP course, overall and disaggregated, based on number of AP courses offered during the 2015-16 school year

AP courses offered	All students	White students	Black students	Hispanic students	Asian students	American Indian or Alaska Native students
0-3	2.3%	2.4%	2.1%	2.2%	5.1%	1.8%
4-10	13.7%	14.6%	9.9%	13.2%	24.8%	11.8%
11-17	21.5%	23.9%	13.9%	18.6%	36.7%	18.3%
18-37	30.1%	33.0%	18.5%	23.3%	50.1%	25.5%
Overall	17.4%	18.5%	10.5%	15.6%	37.5%	9.3%

Sources: Authors' calculations based on U.S. Department of Education's Civil Rights Data Collection, "Detailed Data Tables, 2015 survey," available at <https://ocrdata.ed.gov/flex/Reports.aspx?type=school> (last accessed April 2021). For more information on the source and the authors' methodology, see Roby Chatterji, Neil Campbell, and Abby Quirk, "Closing Advanced Coursework Equity Gaps for All Students" (Washington: Center for American Progress, 2021), available at <https://www.americanprogress.org/?p=500759>.

These gaps in AP course enrollment for Black, Latinx, and Indigenous students get progressively larger in the high schools offering the highest number of AP courses. The gap in AP course enrollment rates between all students and Black students attending schools offering 4 to 10 AP courses was 3.8 percentage points, but it was 11.6 percentage points for students attending schools offering 18 to 37 AP courses. For Latinx students, there was a minimal gap in AP course enrollment rates for students attending schools offering 4 to 10 AP courses, but the gap in AP course enrollment between all students and Latinx students rose to 6.8 percentage points in schools offering 18 to 37 AP courses.

Gaps in AP test taking were less pronounced than gaps in other parts of the funnel. Across the board, students who enrolled in at least one AP course were fairly likely to end up taking at least one AP exam. Across the groups of schools overall and in overall averages for each racial and ethnic subgroup, more than 60 percent of students who took an AP course ended up taking an AP exam.

But there were still notable differences in the rates at which Black, Latinx, and Indigenous students took AP exams compared with their white and Asian peers. (see Table 4) For Black and Latinx students, those differences were driven by gaps in AP test taking rates at schools offering 11 to 37 AP courses. For students attending schools offering 11 to 37 AP courses, the AP test taking rates for Black, Latinx, and Indigenous high school students who enrolled in an AP course were notably lower than those for other student subgroups. The gaps, however, were not as pronounced here as in other parts of the funnel.

TABLE 4
National test-taking rates among Advanced Placement (AP) students, by racial and ethnic subgroup

Percentage of public high school students who took at least 1 AP test among those who enrolled in an AP course, overall and disaggregated, based on number of AP courses offered during the 2015-16 school year

AP courses offered	All AP students	White AP students	Black AP students	Hispanic AP students	Asian AP students	American Indian or Alaska Native AP students
0–3	60.9%	60.3%	63.9%	61.1%	66.3%	46.7%
4–10	70.6%	70.2%	70.5%	70.4%	79.9%	60.3%
11–17	73.5%	75.0%	68.8%	69.8%	81.7%	63.9%
18–37	77.8%	78.9%	69.8%	72.5%	85.4%	72.3%
Overall	74.5%	75.3%	69.4%	70.8%	83.5%	63.6%

Sources: Authors' calculations based on U.S. Department of Education's Civil Rights Data Collection, "Detailed Data Tables, 2015 survey," available at <https://ocrdata.ed.gov/flex/Reports.aspx?type=school> (last accessed April 2021). For more information on the source and the authors' methodology, see Roby Chatterji, Neil Campbell, and Abby Quirk, "Closing Advanced Coursework Equity Gaps for All Students" (Washington: Center for American Progress, 2021), available at <https://www.americanprogress.org/?p=500759>.

Gaps in AP exam passage rates for Black, Latinx, and Indigenous test-takers persist. Among high school students who take an AP test, the data on which students are earning qualifying scores for college credit illustrate the systemic gaps related to advanced coursework. Despite the fact that there has been growth in the number of passing scores across racial and ethnic subgroups in the past decade, the gaps between student subgroups have not shrunk at the same rate.⁴⁵ Recent research found that the number of Black and Latinx students who earned at least one qualifying score on an AP exam rose from 80,000 students in the graduating class of 2008 to nearly 210,000 in 2018; however, this has been eclipsed by an increase in passing scores for white and Asian students during the same period of time.⁴⁶ In the analysis of 2015-16 CRDC data, Black, Latinx, and Indigenous high school students taking at least one AP test were less likely to receive at least one passing score—at all levels of AP course offerings—than the white, Asian, and overall high school student population. (see Table 5)

Even for high school students enrolled in schools offering 18 to 37 AP courses, the percentage of Black students taking an AP test who received a passing score was 30 points lower than the rate for white students. The gap in receiving a passing score was more than 50 percentage points between white and Indigenous students who took an AP test and nearly 20 percentage points between white and Latinx students who took an AP test.

TABLE 5
National Advanced Placement (AP) test-taker passing rate, by racial and ethnic subgroup

Percentage of public high school students who earned at least 1 passing score—among students who took an AP test, overall and disaggregated—based on number of AP courses offered during the 2015-16 school year

AP courses offered	All AP students	White AP students	Black AP students	Hispanic AP students	Asian AP students	American Indian or Alaska Native AP students
0–3	33.5%	43.8%	11.3%	29.1%	31.9%	7.8%
4–10	43.3%	53.6%	16.4%	36.8%	42.0%	9.2%
11–17	54.0%	63.3%	25.0%	42.8%	60.9%	8.3%
18–37	66.5%	71.6%	41.5%	53.3%	77.0%	17.0%
Overall	57.4%	64.9%	28.1%	45.8%	68.6%	11.4%

Sources: Authors' calculations based on U.S. Department of Education's Civil Rights Data Collection, "Detailed Data Tables, 2015 survey," available at <https://ocrdata.ed.gov/flex/Reports.aspx?type=school> (last accessed April 2021). For more information on the source and the authors' methodology, see Roby Chatterji, Neil Campbell, and Abby Quirk, "Closing Advanced Coursework Equity Gaps for All Students" (Washington: Center for American Progress, 2021), available at <https://www.americanprogress.org/?p=500759>.

It is worth highlighting that the data in Table 5 only examine the final stage of the funnel—students enrolled in an AP course who took an AP test—not the total universe of high school students. The fact that there were still such wide gaps at this level—in addition to the gaps in access to AP coursework, the gaps in AP course enrollment rates, and the gaps in AP test taking rates—demonstrates that the inequities were compounded through each stage of the funnel.

AP opportunity gaps differ across states and racial and ethnic subgroups

The funnels for high school students passing Advanced Placement tests showed consistent opportunity gaps between racial and ethnic subgroups across the country. But the authors' analysis of 2015-16 Civil Rights Data Collection data also highlights that the funnels from AP course offerings to AP test passage can take dramatically different shapes. This suggests that state and local policymakers can use different strategies to prioritize different points of the funnel within their purview. For example, these funnels could highlight that Black students in one state experienced significant differences in access to AP courses, while another state might recognize more substantial differences in the likelihood of students enrolling in AP courses. The first step, however, would be to understand where dramatic “leaky points” existed in a particular funnel.

In order to illustrate how the funnel played out for particular groups of students, the authors calculated how 1,000 high school students, overall and within racial and ethnic subgroups, would have progressed through these AP funnels. Based on the average national likelihood of enrolling in at least one AP course, the average national likelihood of taking at least one AP test, and the average national likelihood of passing at least one AP test, approximately 74 out of every 1,000 high school students—grades 9 to 12—passed an AP test in the 2015-16 school year. The same simulation in Ohio—based on average statewide course enrollment, test taking, and test passage rates—showed that approximately 50 out of every 1,000 high school students passed an AP test in 2015-16. However, for Black high school students in Ohio, only 10 out of every 1,000 students passed an AP test in 2015-16. In Washington, D.C., approximately 58 out of every 1,000 high school students passed an AP test in 2015-16, but only 25 out of every 1,000 Black high school students passed an AP test that school year.

Black students in both Washington, D.C., and Ohio were less likely to pass—or earn a qualifying score on—at least one AP test compared with the overall passage averages in those respective states. However, the shapes of the funnels in Ohio (see Table 6) and Washington, D.C. (see Table 7), illustrate significant differences in how those gaps emerged and could suggest different strategies to achieve more equitable outcomes regarding advanced coursework.

TABLE 6

The Advanced Placement (AP) credit funnel in Ohio, per every 1,000 Black students

Estimation of how many Black high school students would enroll in an AP course, take an AP test, and pass an AP test for every 1,000 Black public high school students in the state during the 2015-16 school year

AP courses offered	0–3	4–10	11–17	18–37	Total
Number of total students	513	331	96	60	1,000
Number who would enroll in AP course	5	25	9	9	48
Number who would take AP test	3	19	6	8	36
Number who would pass AP test	0	3	2	5	10

Sources: Authors' calculations based on U.S. Department of Education's Civil Rights Data Collection, "Detailed Data Tables, 2015 survey," available at <https://ocrdata.ed.gov/flex/Reports.aspx?type=school> (last accessed April 2021). For more information on the source and the authors' methodology, see Roby Chatterji, Neil Campbell, and Abby Quirk, "Closing Advanced Coursework Equity Gaps for All Students" (Washington: Center for American Progress, 2021), available at <https://www.americanprogress.org/?p=500759>.

TABLE 7

The AP credit funnel in Washington, D.C., per every 1,000 Black students

Estimation of how many Black high school students would enroll in an AP course, take an AP test, and pass an AP test for every 1,000 Black public high school students in Washington, D.C., during the 2015-16 school year

AP courses offered	0–3	4–10	11–17	18–37	Total
Number of total students	225	498	226	51	1,000
Number who would enroll in AP course	7	72	89	14	182
Number who would take AP test	5	59	82	13	159
Number who would pass AP test	0	2	20	3	25

Sources: Authors' calculations based on U.S. Department of Education's Civil Rights Data Collection, "Detailed Data Tables, 2015 survey," available at <https://ocrdata.ed.gov/flex/Reports.aspx?type=school> (last accessed April 2021). For more information on the source and the authors' methodology, see Roby Chatterji, Neil Campbell, and Abby Quirk, "Closing Advanced Coursework Equity Gaps for All Students" (Washington: Center for American Progress, 2021), available at <https://www.americanprogress.org/?p=500759>.

The majority of Black students in Ohio, 51.3 percent, attended high schools offering three or fewer AP courses compared with just 22.5 percent of Black students in Washington, D.C. Even when looking solely at Black students enrolled in schools offering 11 to 37 AP courses, only 4.5 percent of the 156 Black students in Ohio passed an AP test, compared with 8.3 percent of the 277 Black students enrolled in similar schools in Washington, D.C.

To further explore how the AP funnel would look across the country, the interactive data tool [at this link](#) illustrates and allows comparison of what the progression through the AP funnel would look like for 1,000 students, both overall and within racial and ethnic subgroups, at a national level and also for all 50 states and Washington, D.C.

Recommendations

This analysis makes it clear that consistent opportunity gaps existed across the country in 2015 and 2016 at every level of the Advanced Placement funnel—in which high school students had more access to AP coursework, in which students were enrolling in AP coursework, in which students were taking AP tests, and ultimately in which high school students were passing AP tests. These gaps existed across racial and ethnic student subgroups in this analysis, and other research has shown gaps along socioeconomic lines. That is why it is important for state and local policymakers to “look under the hood” to understand what factors are driving these gaps across geography and among subgroups. The different shapes of the funnels for high school students earning college credit in a particular state or district—as well as school size, organizational capacity, and available resources—may imply different investments and strategies to close opportunity gaps. To effectively expand and improve equitable advanced coursework opportunities, the Center for American Progress recommends the following actions.

Collect and track accurate and reliable data on advanced coursework

Underpinning other investments discussed below, one thing that policymakers at both the federal and state levels can do right now is ensure that there are clear, transparent, and disaggregated data available on advanced coursework offerings, participation levels, and outcomes for high school students. The federal CRDC—the biennial collection of survey data from nearly every public school in the country administered by the U.S Department of Education’s Office for Civil Rights⁴⁷—should reinstate the inclusion of disaggregated school-level data on course availability, participation levels, and outcomes for high school students in advanced coursework. While the 2015-16 CRDC collected these data (including outcomes data for students enrolled in AP courses), the Department of Education eliminated certain elements of data collection for the most recent (2017-18) CRDC, including information on the full breadth of student enrollment in AP coursework and questions regarding how many students took and passed an AP exam.⁴⁸

- › The federal government should resume collecting disaggregated school-level data on advanced coursework in the Civil Rights Data Collection.
- › States should include detailed disaggregated data on advanced coursework on school report cards.

The Department of Education has proposed leaving out data collection on advanced coursework outcomes once again for the upcoming CRDC, prompting a number of groups to call on it to reinstate this data collection.⁴⁹ The College Board, which publishes national and state-level data on AP test taking and scoring, has also called for the reinstatement of these school-level data.⁵⁰ The Education Trust, the national non-profit organization leading this call, has emphasized that “the Department’s proposal to eliminate data on exam taking and passing would mask disparities experienced by students of color in the classroom.”⁵¹ These data are critical for states, districts, schools, and the public to identify where opportunity gaps exist and focus on not only whether students have advanced coursework opportunities available to them but also which students are enrolling and succeeding in advanced coursework.

State policymakers should also include this kind of information on their school report cards—for all forms of advanced coursework. Kentucky provides a good example of a state publishing significant data on how its high school students are accessing, enrolling, and performing in advanced coursework.⁵² Kentucky publicly shares extensive data related to advanced coursework, including disaggregated data on course offerings, course enrollment, course completion, number of students tested, and the number of students earning qualifying scores for AP, International Baccalaureate, and Cambridge Advanced International (CAI) coursework. The state also shares disaggregated data on dual enrollment opportunities, including course offerings, course completion, and number of students earning a qualifying grade in a dual enrollment course.

Data beyond just what kind of advanced coursework offerings are available to students are a necessary first step to ensuring that equitable and effective investments are made in ways that grow participation and success in advanced coursework and reduce opportunity gaps among high school students.

Leverage federal and state support throughout the stages of the funnel

As states consider how to build and target their investments in helping more students enroll and succeed in advanced coursework, it should be noted that these investments do not need to be sequential or affect only one stage of the funnel at a time. States can and should consider a range of investments that would help simultaneously move the needle in several areas, including:

- Ready students for advanced coursework in earlier grades
- Expanding access to advanced coursework opportunities for all students
- Removing barriers to the identification and enrollment of students in advanced coursework

- Supporting students and families in signing up for and taking advanced coursework exams
- Providing supports and scaffolds to teachers and students to grow the number of students earning college credit

Launching comprehensive state-level partnerships

As states are crafting policies around advanced coursework, they can look to a number of existing models and dedicated partnerships already operating around the country to expand equity in access and success for students in advanced coursework.

Mass Insight Education & Research, a Boston-based nonprofit organization, has been partnering with school districts across Massachusetts for more than 15 years to increase student participation and performance in AP courses by providing instructional resources, professional development for teachers, and student supports with an equity lens.⁵³ AdvanceKentucky, which partners with the Kentucky Department of Education and the National Math and Science Initiative, helps school districts across Kentucky establish, grow, and sustain AP programs at their high schools, in addition to helping middle schools in the state increase the number of eighth-grade students enrolling and succeeding in algebra.⁵⁴ Equal Opportunity Schools, an organization based in Seattle, has worked with school districts across 33 states to help improve access to and enrollment in AP and International Baccalaureate courses for students from low-income families and students of color.⁵⁵

Investing new and existing federal funding

While state budget dollars can provide funding for the work of these kinds of organizations, there are also a number of federal funding sources that states and districts can leverage to work with these organizations and impact the different stages of the success funnel. States and districts can use their funding allocations under Title II-A of the Every Student Succeeds Act to provide professional development opportunities for teachers in advanced coursework; similarly, they can use their Title III ESSA dollars to provide professional development in advanced coursework for teachers who serve English-learner (EL) student populations.⁵⁶ States and districts can also utilize funding under Title I and the Title IV-A block grant of ESSA to pay exam fees and course subscription fees for students in AP and IB classes, as well as to increase dual enrollment opportunities for students.⁵⁷

Under the recently authorized American Rescue Plan Act, the flexibility and size of funding will allow states to invest robustly in evidence-based programs that address learning recovery, extended summer learning and enrichment programs, and supports

- › States should develop and invest in partnership organizations that can support schools to expand offerings, provide professional development to teachers, and help students prepare for and succeed in advanced courses, not just AP courses.
- › States and districts should leverage available federal funding, including Title I, Title II, Title III, and Title IV of the Every Student Succeeds Act (ESSA) and funding from the American Rescue Plan Act, to expand and improve advanced coursework offerings.
- › States should invest in strategies to address and elevate the rigor of all of their high school courses.

around the educator pipeline.⁵⁸ As states begin to develop plans for using these funds, they should consider investing in strategies and programs that help students enroll and succeed in advanced coursework.

There is also interest in Congress for increasing funding for states related to expanding high school students' access to and success in advanced coursework. In August 2020, Sen. Cory Booker (D-NJ) and Rep. Joaquin Castro (D-TX) introduced legislation known as the Advanced Coursework Equity Act—a bill that would establish an \$800 million competitive grant program that would be doled out to states and school districts over the course of three years for activities such as expanding enrollment in advanced courses, covering the costs of exam fees for low-income students, and training and hiring teachers to teach advanced courses.⁵⁹ A number of organizations have publicly supported the proposed legislation, and it was reintroduced in April 2021 for debate in the 117th Congress.⁶⁰

Prepare future high schoolers for success in advanced coursework

A key investment that states and school districts should pursue to reduce opportunity gaps in advanced coursework is cultivating a pipeline of students who are ready and prepared for rigorous coursework in the years leading up to their high school experience.

One strategy that districts have been investing in is vertical alignment—essentially, mapping out the skills and competencies students in higher grade levels should know and using that as the foundation for developing curricula priorities and standards all the way down to the kindergarten level. Beyond districts engaging in backward planning of priority standards or creating a profile of a graduate, vertical alignment investments can be particularly impactful in the establishment of regular communication and consistent conversations between school leaders and teachers across high schools and middle schools.

Regina Murphy, the middle school principal at Glasgow Middle School in Glasgow, Kentucky, says that ensuring that her teachers are talking and sharing lesson planning with teachers at their companion high school is crucial to making sure that middle school students are “not just getting the same concepts, but also the same kind of vocabulary and modeling during instruction that they will also get in high school.”⁶¹ Murphy began by collaborating with her fellow principal at Glasgow High School and focusing on their non-negotiables—“essentially what does a sixth-grader need to know for every subject and then mapping that for all grade levels through

- › States and districts should work to vertically align standards critical for student success at the high school level with earlier grades to prepare students for advanced coursework.
- › Districts should invest in ongoing collaboration between elementary, middle, and high school staff to continually improve alignment and coordination of instructional concepts and vocabulary.

12th grade.”⁶² Once these were established, Murphy worked to make sure her teachers were “talking about these concepts over and over again in sixth, seventh, and eighth grade so that there is consistency and that students get the rigor and skills for success in high school.”⁶³

The vertical alignment work at Glasgow Middle School started through initial grant funding provided by AdvanceKentucky, with AdvanceKentucky helping arrange a summer professional development training for the middle school math teachers housed at Glasgow High School.⁶⁴ This led to deeper conversations among the middle and high school math teachers about what they were teaching and their methods. Over time, the conversations between the math teachers across grade levels evolved into conversations between teachers in other subject areas as well, with the two principals eventually putting together what Murphy called a “learn-a-palooza where middle school and high school teachers paired up together to put together a presentation on what they were both respectively teaching.”⁶⁵ Part of the process involved the school leaders working to ensure that the conversations between teachers did not involve “blaming and shaming but rather listening and learning to build trust and help build skills and competencies that students need to know.”⁶⁶

For other districts looking to stand up similar kinds of vertical collaboration efforts, Murphy said that “principal leadership and identifying teacher champions from each content area is key to getting this work off the ground.” Beyond that, Murphy outlined that the other planks that support this work include “a commitment to core values of data, intentionality, and school culture—one where we regularly use common assessments and are honest and transparent about where students are and what skills need reinforcement is paramount.”⁶⁷

Expand access to advanced coursework

As schools and districts invest in getting their students ready for advanced coursework, that work is more likely to bear fruit when it is aligned with teachers’ readiness to lead advanced courses and scheduling that maximizes students’ availability.

Preparing teachers for success offering advanced coursework

Investments in offering more advanced coursework opportunities often begin with ensuring that there are sufficient numbers of educators who are prepared to teach advanced coursework through adequate professional development and training, which can be a challenge. Sally Guadagno, the managing director of AP STEM

and English at Mass Insight, noted that “while there is an off-the-shelf solution for getting advanced coursework curriculum into schools, there isn’t necessarily a corresponding off-the-shelf solution to develop the pipeline of teachers needed to teach these courses.”⁶⁸ Mass Insight is helping fill that void by working with the Department of Elementary and Secondary Education in Massachusetts to partner with districts and help provide teachers with the instructional resources, content training, and ongoing coaching supports to successfully offer more advanced coursework opportunities in their schools.⁶⁹ AdvanceKentucky actively works with school districts to provide supplies and equipment as well as intensive training in the summer and fall for teachers to get advanced coursework opportunities up and running in their schools.⁷⁰ Programs such as Mass Insight and AdvanceKentucky operate through a combination of philanthropic partnerships and public money through federal funding and state budget allocations.

While increases in federal and state funding are certainly helpful, many states are already being creative with existing dollars to expand access to advanced coursework. Beyond federal funds that states can leverage through ESSA, a study of AP policies in all 50 states conducted in 2016 by the Education Commission of the States highlighted that 25 states offered some degree of state funding for teachers to attend professional development opportunities. A select number of states also included funding opportunities for school leaders and counselors to attend training on building AP programs at their schools.⁷¹ It is important that these funding investments are implemented in ways that target resources to schools with the highest needs so as not to compound inequities. For example, North Carolina’s authorized AP Partnership provides professional development to teachers and school administrators, including principals and counselors, and must prioritize schools designated as low-performing by the state board.⁷² In Rhode Island, the AP teacher training program mandates by statute that appropriations under the program must go toward training teachers in high schools that do not presently provide AP courses for all students in the four core academic areas of English, math, science, and social science.⁷³

Optimizing school scheduling to increase access to advanced coursework

Another strategy that districts can use to improve access to advanced coursework does not actually involve offering more courses. Optimizing a school’s master schedule can increase the number of students able to enroll in advanced courses by reducing conflicts in students’ schedules when there are multiple courses they want to take that are offered at competing times. Optimizing the master schedule can allow qualified teachers to accommodate the number of students requesting courses and can ensure that courses are organized in ways that allow high school students to enroll in advanced coursework

States and school districts can expand access to advanced coursework by:

- › Making investments in statewide partnerships focused on equitably expanding advanced coursework
- › Working to optimize schoolwide master schedules to reduce conflicts and open up more slots for students in advanced coursework
- › Remaining open to leveraging technology to expand offerings, which could entail virtual offerings across schools within a district, in regional partnerships, or through high-quality state virtual schools

opportunities that most closely match their interests.⁷⁴ The Education Trust highlighted efforts at Alhambra High School, located in Los Angeles County, to optimize the master course schedule. Teachers at Alhambra said the practice has opened up more slots for students and improved the diversity of their AP classes.⁷⁵ Additionally, master scheduling can allow school administrators to more efficiently offer activities such as subject-specific tutorials that are embedded into the school day to make them more accessible to both students and teachers.⁷⁶

Offering access to high-quality virtual advanced courses

In instances where expanding advanced coursework opportunities is particularly challenging due to low potential enrollment or staffing limitations such as no teachers being certified to teach a physics course, one approach that districts can explore is to provide access to virtual courses. This could take the form of synchronous classes across high schools, partnerships with other school districts to aggregate demand for advanced courses, or a high-quality state virtual school.

It is worth noting that there is a distinction between full-time virtual school for students and having students use a virtual model for one or two classes in their schedule. Moreover, full-time virtual schools underperform compared with blended models or traditional brick-and-mortar schools on a variety of academic outcomes.⁷⁷

Accessing advanced coursework opportunities through virtual models should not be the only option that students have—particularly in core subject areas—but it can expand the options available to students in certain settings. Therefore, if schools and districts are considering leveraging virtual options for students in advanced coursework, it is critical that they provide students with the necessary supports and tools, including regular interactions with their instructor and an adult facilitator physically present at their school.⁷⁸

In select cases, the use of virtual programs can help connect students in schools to a qualified instructor in advanced coursework who may not be physically available where they live. However, there are some key considerations that districts must evaluate to ensure these courses have adequate quality, rigor, and oversight. For example, the North Carolina Virtual Public School program is authorized and operated by the state's Department of Public Instruction. As a result, virtual courses are subject to regular audits to ensure that the curricula and instruction is appropriately rigorous, and in instances where instruction falls short, recommendations are made for how virtual courses can improve.⁷⁹ Michigan Virtual School—which recently started a partnership with the College Board to expand access to AP coursework across the

state, particularly in rural areas—is reliant on pairing local mentors at physical school locations with virtual classes to help students persist in their courses. Moreover, the program has committed to making sure that online instructors receive ongoing professional development and are trained using nationally benchmarked standards.⁸⁰

Reduce barriers to enrollment in advanced coursework

As state policymakers and school district leaders work to prepare students for advanced coursework opportunities and expand access, another systematic policy to focus on is removing potential barriers to identifying students for and enrolling them in advanced coursework—including the role bias may play.

One strategy states are exploring to address some of these biases is the use of “academic acceleration” or “automatic enrollment” policies for advanced coursework to ensure that high school students are being properly identified and given the chance to enroll in these classes.⁸⁶ Under these policies, students who meet benchmark proficiency levels on statewide examinations or prerequisite courses are automatically enrolled in the next highest available class, including advanced coursework opportunities.⁸⁷

Josh Garcia, who is currently transitioning from his role as deputy superintendent at Washington’s Tacoma Public Schools (TPS) to the superintendent role, was one of the first champions of this policy a decade ago. In 2011, when Garcia was the chief academic officer at Federal Way Public Schools (FWPS) district in Washington, he helped design an automatic enrollment policy for the district after having a number of conversations with staff and community members about biases and gatekeeping practices that were keeping BIPOC students out of advanced coursework.⁸⁸

Garcia noted that while FWPS served a very diverse student population, the seats in the advanced coursework classes across the district, particularly the AP classes, were disproportionately filled with white and Asian students. Proficiency data on statewide exams and course grades, however, made it clear that many BIPOC students were not enrolling in these advanced academic opportunities despite being prepared to succeed in and having access to them.

- › States and districts should analyze data to reduce opportunities for bias in systems used to identify students for advanced courses from elementary through high school.
- › States and districts should implement automatic enrollment or academic acceleration policies that automatically place students with demonstrated proficiency in the subsequent highest available course.
- › Districts should recruit and mentor students early in their high school careers to prepare them for enrollment and success in advanced coursework.

Enrollment gaps in academically rigorous coursework exist across the K-12 system

The enrollment gaps across racial and ethnic subgroups for students in academically advanced coursework are not limited to the high school level. Rigorous academic programs that prepare students for success in high school-level advanced coursework—such as gifted and talented programs—are known to underrepresent Black, Latinx, and Indigenous students.⁸¹ For example, Black and Latinx eighth-graders across the country are underrepresented in Algebra I, a known on-ramp to prepare for success in advanced courses in high school.⁸²

Subjective systems contribute to identification and enrollment gaps

Identification and enrollment of students for academically advanced coursework—at all grade levels—often relies on referrals or recommendations by a teacher or school counselor. Since these are subjective in nature, research has shown both conscious and unconscious bias can affect enrollment decisions for advanced courses. One recent study showed that school counselors were less likely to recommend Black female students for AP calculus, even in cases where they were just as prepared as other students.⁸³

Universal screening can reduce enrollment gaps

These biases can create compounding systematic and institutional barriers that keep Black, Latinx, and Indigenous students locked out of opportunities for rigorous academic instruction throughout their educational careers. Some school districts have tried to address these problems head on. For example, Broward County Public Schools in Florida began a universal screening in 2005 of all their second grade students for gifted and talented programs and ended up raising the percentage of Black students receiving gifted services by 80 percent and the percentage of Latinx students by 130 percent.⁸⁴ Likewise, Denver Public Schools began universal screening in 2016 for gifted and talented students in kindergarten, second grade, and sixth grade and was able to double the percentage of Latinx students in gifted programs.⁸⁵ States and districts are also exploring how to remove some of these biases and barriers at the middle and high school levels.

At first, Garcia urged school staff members to convince more BIPOC students to consider taking AP classes, but that was not moving the needle fast enough. After a number of conversations with the community, he realized that he needed to do more to get at what he said were the “implicit and explicit biases and gatekeeping practices that were denying BIPOC students with demonstrated potential entry into these advanced classes.”⁸⁹ Starting in the 2010-11 school year, he helped develop what became known as an “automatic enrollment” or “academic acceleration” policy at FWPS, meaning any students in grades 6 through 12 who met benchmark proficiency levels on statewide examinations were automatically enrolled in the subsequent highest available class, including advanced coursework classes such as AP.⁹⁰

Instead of relying on existing tracking systems or referrals by a teacher or counselor, the hope was that the automatic enrollment policy would remove barriers to entry into advanced coursework for qualified high school students while still preserving the right of students and parents to opt out of these classes if they chose to do so. As Garcia sees it, if the prevailing belief in the district is that all students should be achieving at high levels,

then “there is a moral imperative in this work that isn’t just about adding new policies to get more students into these classes, but also removing institutional and systematic barriers that keep students out.”⁹¹ Garcia believes that this kind of work “needs to happen with the entire school staff—including school leaders and counselors.”⁹²

Garcia realized that a policy such as automatic enrollment could not happen in isolation and that just closing gaps in access to and even enrollment in advanced coursework was not sufficient to get students to succeed in advanced courses. He advocates that districts need to adopt a data-driven, continuous improvement approach to this work that ensures teachers and students alike receive multiple supports and tools to be set up for success.

Some of the focus areas for TPS include optimizing the professional development cycle for teachers in order to build a pipeline of prepared teachers who are able to meet student demand for advanced coursework and effectively support those students in advanced classes. Garcia also stresses the importance of preparing students to be successful in advanced coursework well before they get to high school by expanding feeder programs, which is why TPS uses universal screening for gifted and talented programs in early grades and makes sure that these programs are accessible and located near where students and their families live.⁹³ Likewise, Garcia coordinates with his middle and elementary school leadership to make sure the priority standards being used at the high school level that are most critical to student success are aligned all the way back to the kindergarten level to ensure that students are getting consistent vocabulary and concept instruction throughout their educational careers. Garcia also notes that one way to make sure that more high school students take advanced coursework tests is to reduce the financial barriers for students and families, which is why TPS pays exam fees for all its students.

According to Garcia, the sum of all these efforts has been a culture change: “Students in Tacoma know about AP early on, they know they’re going to have it in their high school, they know lots of students who have taken it, and they know it’s going to be paid for—so that takes away some of the fear and creates the expectation that it’s something for them.” As Garcia notes, this work toward equitable outcomes in advanced coursework is a continuous process with much work remaining. Future priorities include making advanced coursework more accessible for students with disabilities and making sure that TPS is getting information about advanced coursework programs to families in multiple languages.⁹⁴

The policy that began at FWPS in 2011 soon spread to more districts across the state, including Garcia’s current district, Tacoma Public Schools, and automatic enrollment will become the policy for all districts in the state of Washington beginning in the 2021-22 school year.⁹⁵ Other states across the country have started to pass automatic

enrollment policies of their own, including Colorado, Nevada, North Carolina, and Illinois.⁹⁶ Garcia’s advice to other state policymakers or district leaders who are looking to start this kind of work is that “it’s never perfect, but it’s always worth it—if you’ve got the right intentions, you’ll be better off tomorrow than you are today.”⁹⁷

Increasing enrollment of underrepresented students in advanced coursework can also take the form of mentorship and recruiting at the individual school level. Chris Snow, a history teacher at Henry Clay High School in Lexington, Kentucky, decided to form an Equity in AP program for the students at his high school more than six years ago.⁹⁸ Essentially, the program cultivates mentor/mentee relationships designed to interest underrepresented students in AP classes and to help these students succeed once they enroll. Ninth-grade teachers nominate their students for this program based on a variety of factors, and then each ninth-grade student is paired with an upperclassman “who will tutor them, introduce them to AP teachers, and arrange for them to sit in on AP classes during their freshman year.”⁹⁹ One of the hallmarks of the program is that the mentees often become the mentors their senior year and continue the cycle.¹⁰⁰

Support students and families in test taking for advanced coursework

States and school districts should consider coupling the investments they make in expanding access to and enrollment in advanced coursework with supports related to advanced coursework examinations. One simple strategy to support students and families is state-level investments in subsidies or fee waivers that reduce or eliminate the costs of courses and exam fees for students taking advanced coursework tests, particularly for students from families with low incomes. According to the College Board, a typical AP exam fee for U.S. students in 2021 was \$95.¹⁰¹ While there is a school rebate and fee reduction available for eligible students, this exam cost is still a financial barrier for a number of families, especially if a student is considering taking multiple exams. Likewise, despite the fact that the IB program decided to eliminate its \$172 exam fee in 2019,¹⁰² there is still a \$119 fee for each IB course a student takes in the International Baccalaureate Diploma Programme.¹⁰³

While federal funding from the Student Support and Academic Enrichment Block Grant is available to districts to help cover course subscription costs and alleviate exam fees for students, several states have policies and programs designed to further ease the financial burden of advanced coursework exams. The Education Commission of the States released a report in 2016 finding that 29 states are offering additional fee reductions or waivers on AP tests for students from low-income families.¹⁰⁴ Some states,

- › States and districts should invest to eliminate subscription or examination fees for advanced coursework.
- › Districts should initiate regular conversations with families in their home languages about advanced coursework registration timelines, program availability, and cost reductions.

such as North Carolina, also extend this benefit to all public high school students—regardless of their income level—and cover the entire cost of all AP exams for every public high school student in the state.¹⁰⁵

States can also support and make sure that districts and schools utilize a robust communications system to ensure that information on advanced coursework is shared widely through multiple channels and made available in families' home languages. This includes information about what advanced coursework opportunities are available, testing registration deadlines, and testing fee waivers.¹⁰⁶ Additionally, individual districts and schools can place greater emphasis on engaging students and building a culture that celebrates advanced coursework. Sarah Phillips, the director of research and impact at Mass Insight, noted that some schools have expanded their community outreach in an effort to get parents and local businesses involved in schools, offering events such as a kick-off or pep rally for students that highlights advanced coursework as a way to generate excitement and support just as schools often do for athletics.¹⁰⁷

Create pathways for students to succeed in advanced coursework

As schools and districts invest in strategies to enroll more high school students in advanced coursework opportunities and support student test taking in advanced courses, they will also want to focus on the next step of the process—helping students pass advanced coursework tests. This means giving teachers and students alike the resources, supports, and scaffolds that they need to be successful.

One worthwhile investment for districts and school leaders to explore is targeted and ongoing professional development for teachers. In particular, establishing regional and statewide communities of practice and professional learning networks among advanced coursework instructors can be particularly effective in not only helping these teachers master their content and craft but also in cultivating a cadre of teacher leaders who are able to become coaches to other teachers in their local area.

Nora Tsoutsis, an educator in Boston Public Schools, has spent the past several years working as a teacher leader with Mass Insight and its partner schools in the Boston area. She cites Mass Insight's development of a teacher community with its partner schools throughout the state as a key component of improving instruction and success in advanced coursework.¹⁰⁸ Teachers who participate in Mass Insight's teacher development program typically receive funding to attend an intense weeklong institute of training in the summer around advanced coursework instruction; receive

- › State-level partnerships and districts should invest in professional development and communities of practice for advanced coursework instructors.
- › State-level partnerships and districts should create supplemental opportunities for advanced coursework students to connect with and learn from peers and experts.

supports and materials to help map out their instruction for the coming year; and then meet again for a two-day workshop in the fall to check in on implementation, discuss strategies for their courses, and get feedback on how to make adjustments in their instruction as needed.¹⁰⁹

During the pandemic, in lieu of in-person workshops, teacher cohorts have held monthly virtual sessions where content experts and veteran teachers present on best practices for various courses, which is likely to continue in the future. Tsoutsis says this kind of ongoing interaction is “invigorating for teachers” and allows them to connect with colleagues from across the state, hear about the challenges and solutions other teachers experience, and have a ready-made network to call upon for resources and support.¹¹⁰ Additionally, the establishment of these professional learning communities allows teachers from across the state to tap into and share expert resources, exam question banks, and sample lesson plans with one another, including those provided through the College Board¹¹¹ or the National Math and Science Initiative.¹¹²

The model for Mass Insight’s professional development program also leans heavily on the cultivation of teacher leaders who take their knowledge back to their base schools—an essential component of helping sustain advanced coursework programs at high schools amid teacher or school leader turnover.¹¹³ Many of the teacher leaders who train with Mass Insight also eventually become exam readers, meaning they have an acute sense of what critical thinking skills and competencies are expected of students on advanced coursework examinations and also what kinds of pedagogy and practice can help students reach that level.¹¹⁴

Beyond teachers, high school students in advanced coursework also benefit from having targeted enrichment and direct collaboration opportunities with their peers across schools. High school students who attend schools participating in the Mass Insight program are made aware of and encouraged to attend study sessions throughout the school year to develop their skills, tackle problem areas, and get formative and real-time feedback on mock exams prior to taking an official test. As someone who helps facilitate these sessions, Tsoutsis says they are much like the college experience itself in that they are a great way for students to mix with students from other schools, learn content from other teachers in different styles and delivery structures than they typically receive, and see how they stack up against others in terms of their progress.¹¹⁵ During these sessions, students take a full-length and timed mock exam for advanced coursework classes in English, math, or science and are scored by someone who is not their teacher. Based on their score, students then form a plan

for how to build the skills and competencies to improve.¹¹⁶ In some cases, the actual teachers of these students attend these sessions as well to see how lessons were delivered and what to emphasize based on the students' mock exam performance.

Tsoutsis noted that the participating schools in a region get together at the end of school year to develop a calendar of three different Saturdays throughout the fall, winter, and spring to offer these sessions to students. The sessions are designed so as not to conflict with SAT or ACT testing dates. In a typical school year, they are held at centrally located areas in the region near public transportation to improve access, and students are offered raffle prizes as an incentive to attend. During the pandemic, these sessions were held virtually, and in some cases, students were able to have Zoom-based sessions with exam readers to get a better feel for the kinds of rubrics and evaluative methods that would be used to score their exams.¹¹⁷

Conclusion

This data analysis—which focused on Advanced Placement courses because of the availability, scale, and comparability of the data available from across the country—highlights the scale of advanced coursework opportunity gaps for Black, Latinx, and Indigenous students that extend beyond access. Black and Indigenous students are more likely to enroll in schools offering fewer AP courses, and no matter the level of AP course offerings in a school, Black, Latinx, and Indigenous students are less likely to enroll in an AP course, take an AP test, and receive a passing score on an AP exam. These gaps extend beyond AP courses and are persistent throughout advanced coursework opportunities.

There are, however, strategies and investments at the federal, state, and local levels that can target different levels of the advanced coursework funnel or make the rigor and quality of coursework available to all students. Transparent and accessible data, creative strategies to offer more advanced courses, partnerships to build educators' capacity to successfully lead advanced courses, the fostering of a school culture with high expectations to prepare students for success, and the creation of strong connections with students and families to make the case that advanced courses are for them are all actions that can make advanced coursework more accessible and equitable for all students.

Appendix

The primary data set used in this analysis was obtained from the 2015-16 survey results that were collected as part of the U.S Department of Education’s biennial Civil Rights Data Collection. The 2015-16 survey sample included approximately 17,370 public school districts and 96,440 public schools across the country.¹¹⁸

For each of the 50 states as well as Washington, D.C, the authors filtered schools to select only those that include grades 10, 11, and 12 to limit the data set to high schools and exclude middle schools that went through 9th grade. With those filters in place, the authors downloaded the full CRDC reports for all included schools on “Advanced Course Taking by Subject” (which provided overall and disaggregated enrollment counts of students in AP courses) and “Advanced Placement Course and Test Taking” (which provided overall and disaggregated enrollment counts of student test taking and test passing in an AP course).

For the states of California and Texas, a single download of the state file was not possible due to limitations in the number of schools the CRDC system can display at a time. As a result, the authors manually pulled batches of schools from both states. The authors then used SPSS, a statistical analysis program, to aggregate and restructure these batches, along with the single files from the other 48 states and Washington, D.C, into a single file with one row for each school. The final data set included 23,755 schools.

In addition to the CRDC data, the authors used the Education Demographic and Geographic Estimates data set for locale information.¹¹⁹ Because there are instances where CRDC school IDs do not match National Center for Education Statistics school IDs in the EDGE data, the authors used a crosswalk to link the two data sets by creating a new ID column.¹²⁰ For schools where the crosswalk match returned an error or no data, the ID was returned to the original CRDC ID. This final combination of IDs was used to match locale data for 97.3 percent of schools; the remaining 652 schools did not appear in the EDGE data set and their locale was left blank.

EDGE data includes four locale types (city, suburban, town, and rural) with three subtypes for each (small; midsize; large for city and suburban types; and fringe, distant, and remote for town and rural types).¹²¹ In the present analysis, subtypes were combined into the four major locale types for all schools.

Using the combined data, the authors created weighted quartiles in which all schools in the data set were split into four groups of roughly equal student enrollments. The groups were divided by number of AP courses available at the school. The authors found that groups of 0 to 3 AP courses, 4 to 10, 11 to 17, and 18 to 37 best approximated 25 percent of the national student population per group.

To view student enrollment distribution data by the number of AP courses offered—across all 50 states and by student racial and ethnic subgroup and school locale—please [click here](#).

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