

Increasing Access to Advanced Coursework in Kentucky

By **Kristen Hengtgen, Ph.D., Senior Policy Analyst, P-12 Policy, and Hector Biaggi, Senior Analyst, P-12 Data & Analytics**

Introduction

[Research](#) says that when students have access to advanced coursework opportunities, they work harder and are more engaged in school, have fewer absences and suspensions, and higher graduation rates. Advanced coursework also allows students to earn credits and credentials in high school, so they can get a head start in college and/or their career. Unfortunately, many Black and Latino students and students from low-income backgrounds lack equitable access to advanced coursework opportunities, such as gifted and talented programs in elementary school, eighth grade Algebra courses, Advanced Placement (AP), International Baccalaureate (IB), and dual credit (DC) programs in high school. As a result, these students are missing out on crucial opportunities that can set them up for success after high school.

Existing inequities in access to advanced coursework were exacerbated during the pandemic, when schools went online and AP, IB, and DC classes were quickly overhauled or canceled. Many already underserved students with limited access to technology, interruptions at home, and/or mental health issues were cut off from the additional resources and supports they needed to succeed and experienced a [significant amount](#) of unfinished learning. But, many schools and districts used federal emergency and recovery funds and new mechanisms to extend access to these students, and [data shows](#) that students with advanced coursework opportunities in middle school fared better than their peers, which suggests that investing in evidence-based programs and practices can accelerate students' learning and reduce persistent inequities.

Increasing access to advanced coursework requires commitment from state leaders to collect and analyze disaggregated participation and outcomes data and targeted, data-informed efforts to develop policies that increase access to, and success in, high-quality advanced coursework. This brief is designed to support these efforts by providing data analyses and a scan of policies and practices in Kentucky for advocates, educators, and policymakers who are leading this work at the state level.

The failure to give Black students access to advanced coursework in Kentucky starts early. According to our 2020 [report](#), Black and Latino students in Kentucky are significantly underrepresented in gifted education. Given that elementary school gifted and talented courses and eighth grade Algebra I can open doors to later advanced coursework opportunities, KY should focus on ending these early disparities.

Policy Context

Kentucky has done exciting work in recent years to broaden access to advanced coursework opportunities. The state has reduced barriers by offering [higher subsidies](#) for AP exam fees, funding [AdvanceKY](#), which works to expand access to and success in rigorous coursework, unveiling a strong and user friendly [data dashboard](#), including successful completion of DC as a [postsecondary readiness indicator](#), and working to strengthen the pathways that are best for all students. In 2023, Kentucky established a [Dual Credit Attainment Goal](#), which aims, by 2030, to have 50% of Kentucky high school students graduate high school having completed at least one DC course with a qualifying grade of a C or higher, and ensure that those students match the economic and demographic makeup of the state's student body.

In their work across the state, AdvanceKY found that [3 times](#) as many students in schools could succeed in advanced courses, if given the opportunity.

The state has also enacted policies to get more students into advanced pathways. [Kentucky State Regulations on Advanced Placement](#) require each high school to establish a policy on recruiting and assigning students to AP courses, including giving all students equitable access to courses, sharing information, and establishing an equitable process for the recruitment of underrepresented students.

However, in Kentucky, students who are Black, Latino, or from low-income backgrounds are disproportionately less likely to be in advanced courses, even when their schools offer it.

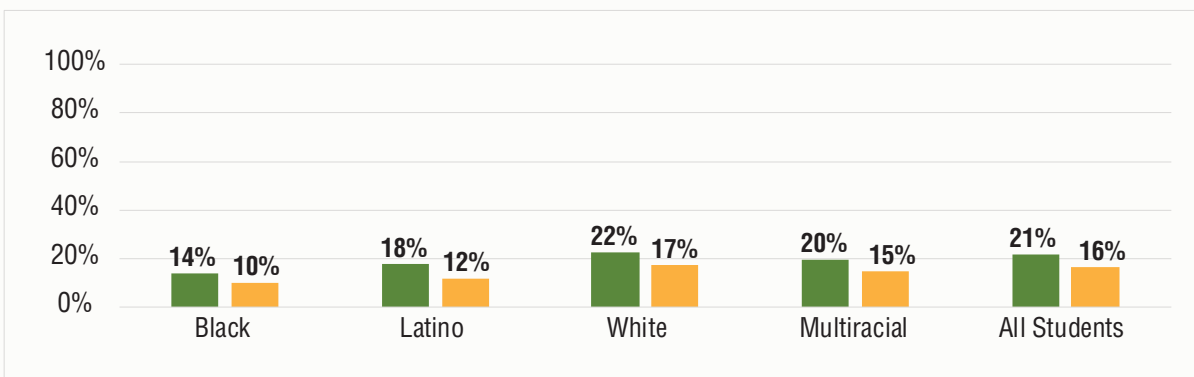
One important factor is that the average district in Kentucky is comprised of 63% students from economically disadvantaged backgrounds, meaning the state is working to support large numbers of students who have additional needs outside of school. Additionally, nearly 1 in 3 Kentucky students are rural, and 22.6% of those students experience poverty – the [second-most in the country](#). Yet rural districts may face challenges such as a lack of internet access, a lack of staff capacity or qualifications, funding disparities, and transportation to partner colleges.

To better understand existing inequities and how the pandemic may have changed those patterns, we analyzed state- and district-level data from the Kentucky Department of Education's School Report Card on student enrollment, access, and performance in AP and DC from the 2018-19 and 2021-22 school years.

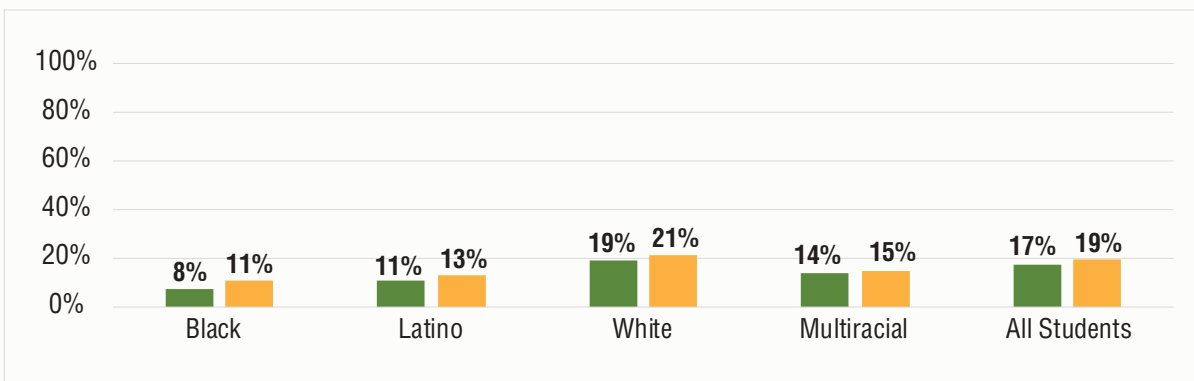
Access to Advanced Courses

From 2018 to 2022, the number of students enrolling in AP classes fell across all student groups. However, enrollment in DC rose, consistent with the state’s [emphasis](#) on DC. And disparities persist, with Black and Latino students much less likely to take both AP and DC than their White peers.

HS AP Enrollment, by Race/Ethnicity: SY 2018-19 & 2021-22



HS DC Enrollment, by Race/Ethnicity: SY 2018-19 & 2021-22



● 18-19 ● 21-22

Source: [Kentucky Department of Education’s Kentucky School Report Card](#) (Accessed June 2023)

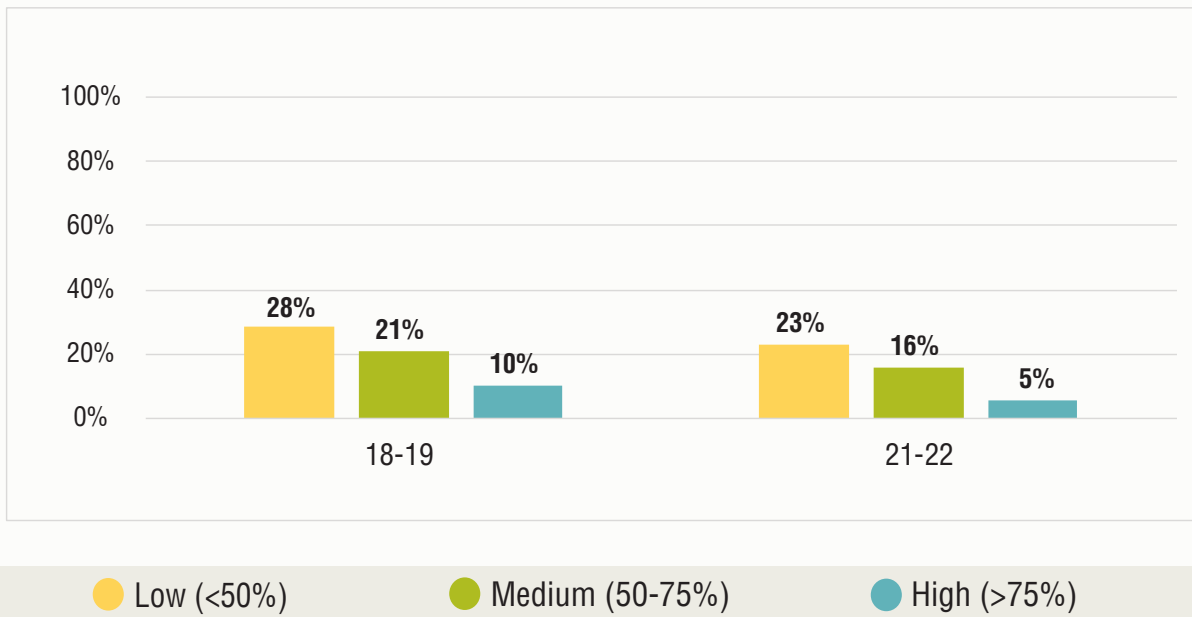
Reading this figure: In 2021-22, 10% of Black students were enrolled in AP courses.

Access in High- and Low-Poverty Districts

While AP enrollment fell across all types of districts, for districts with 75% or more students from low-income backgrounds (referred to as “High,” and represented by the blue bar in the chart below), the share of students enrolled in AP dropped by half.¹ Only 5% of students in districts with high numbers of students from low-income backgrounds enrolled in AP classes in 2021-22.

Districts in which 50% to 75% students are from low-income backgrounds are referred to as “Medium,” and are represented by the green bar in the chart below, and saw a small drop in AP enrollment. Districts in which less than 50% of students are from low-income backgrounds are called “Low,” and represented by the yellow bar below and experienced a 5 percentage point drop in AP enrollment.

HS AP Enrollment, Districts by % Students from Low-Income Backgrounds:
SY 2018-19 & 2021-22



Source: [Kentucky Department of Education's Kentucky School Report Card](#) (Accessed June 2023)

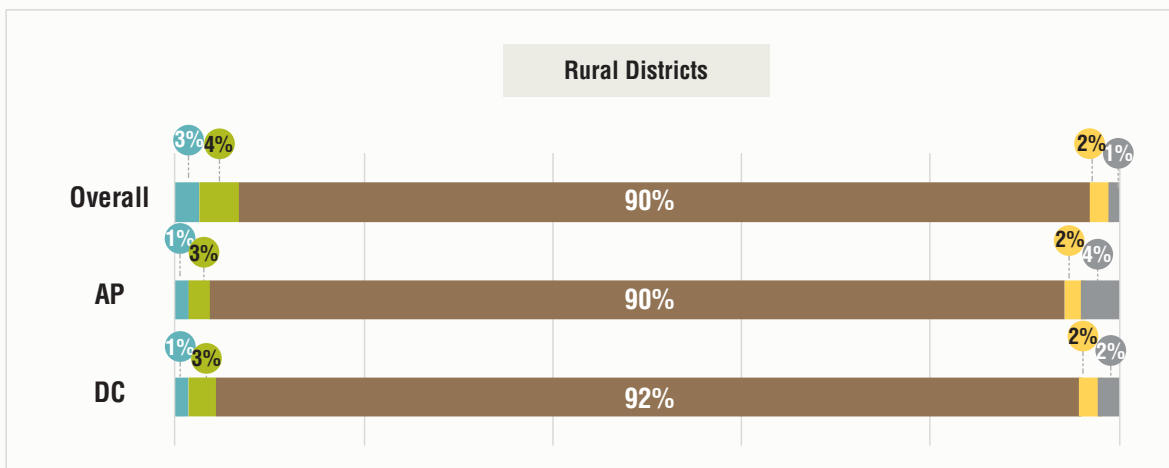
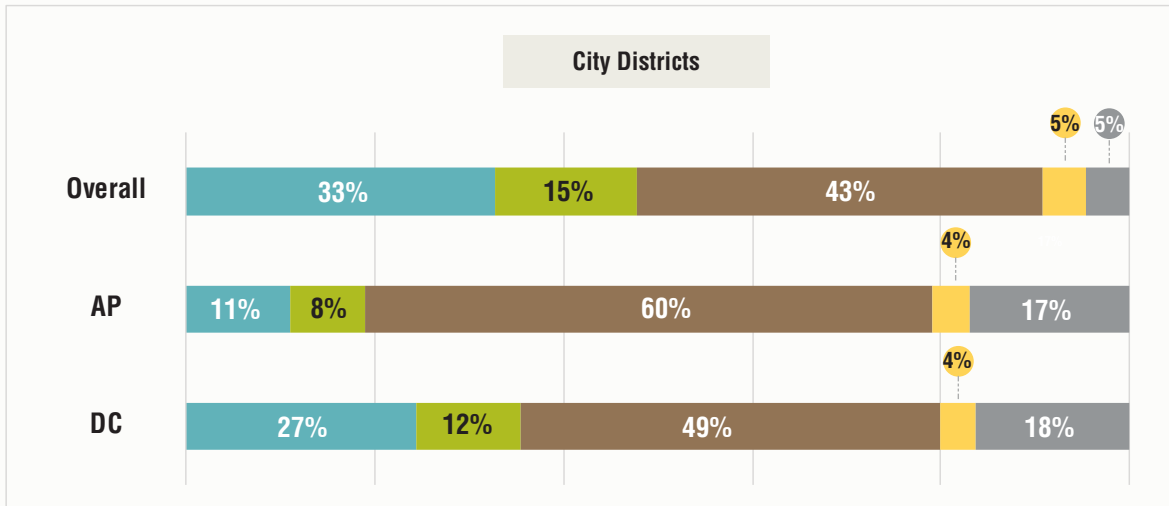
Reading this figure: In 2018-19, 28% of students in districts with low percentages of students from low-income backgrounds were enrolled in AP courses.

The statistics highlighted in the above chart suggest that “Kentucky students in districts with higher levels of students from low income backgrounds have less access to AP courses than their peers in districts with lower levels of the same population’, and access has decreased. That is concerning, particularly because in the average public school district in Kentucky, nearly two thirds (63%) of students are from low-income backgrounds.

Access in Cities and Rural Districts

In rural districts in KY, where White students make up 90% of the student population, enrollment in AP and DC courses roughly mirrors the demographics of the student body.² In the more racially diverse Fayette and Jefferson Counties (categorized here as “City Districts”), there are more glaring racial disparities in advanced coursework enrollment.

Public School Enrollment Demographics: SY 21-22



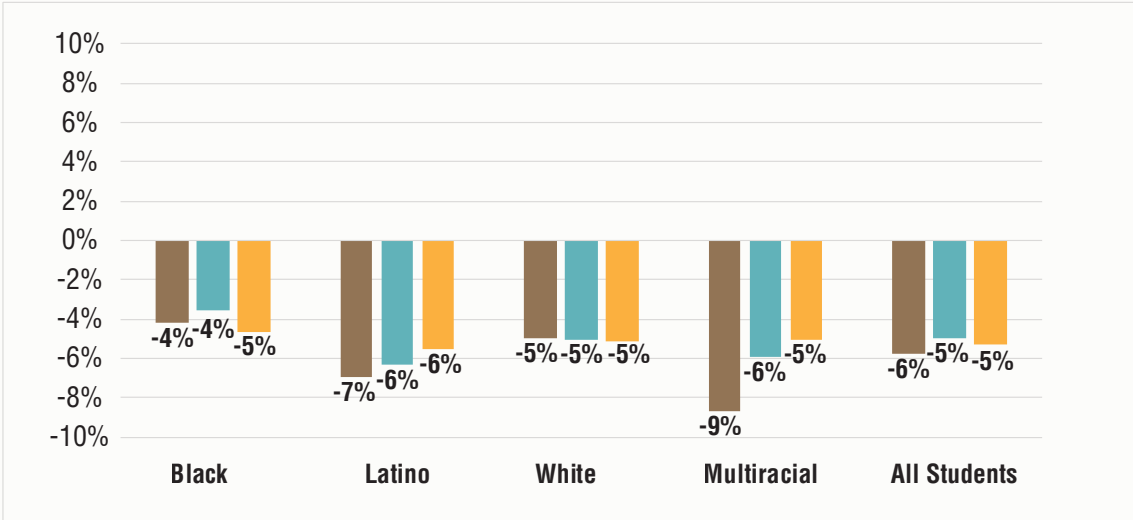
● Black ● Latino ● White ● Multiracial ● Other

Source: [Kentucky Department of Education's Kentucky School Report Card, NCES Common Core of Data](#) (Accessed June 2023)

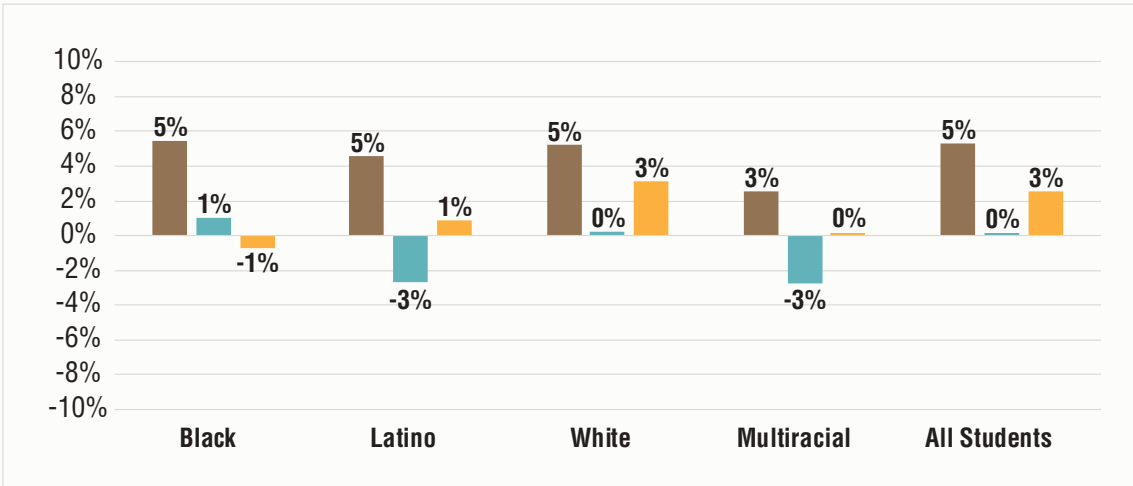
Reading this figure: In 2021-22, 33% of students in city districts were Black, compared to 3% of students in rural districts.

From 2018-19 to 2021-22, enrollment in AP courses dropped in districts in city, rural, and town/suburban locales for all student groups. However, in city districts, enrollment in dual credit courses rose significantly for all student groups; while in towns and suburbs, there was a slight rise for White students.

HS AP Enrollment, by Locale: Difference From SY 2018-19 to 2021-22



HS DC Enrollment, by Locale: Difference From SY 2018-19 to 2021-22



● City ● Rural ● Town/Suburb

Source: [Kentucky Department of Education's Kentucky School Report Card, NCES Common Core of Data](#) (Accessed June 2023)

Reading this figure: Between 2018-19 and 2021-22, AP enrollment for Black students in city districts fell by 4 percentage points.

Completion and Test-Taking in Advanced Courses

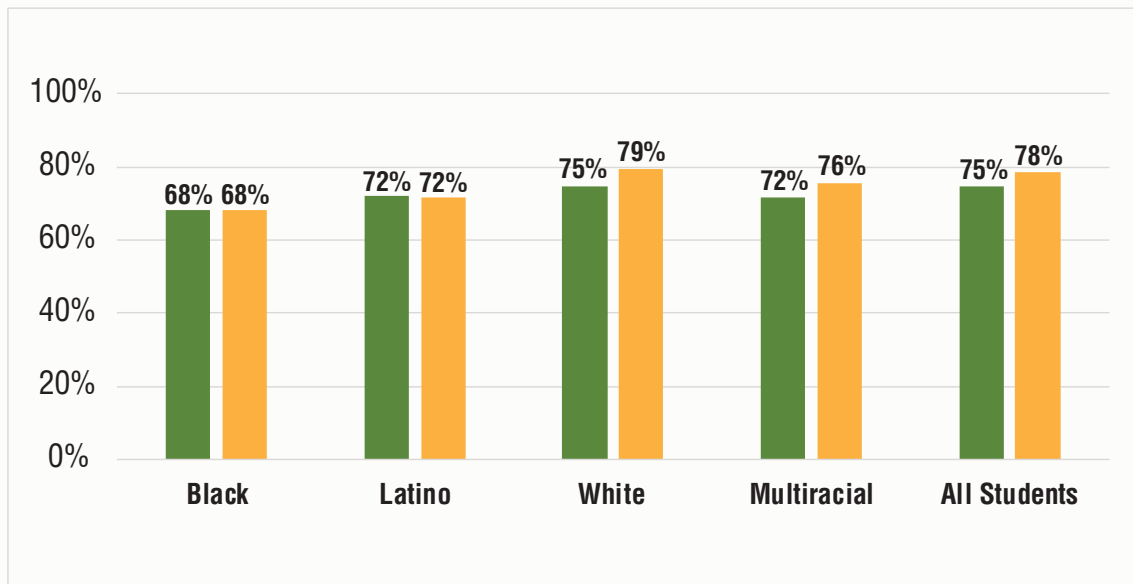
Access is just one part of the puzzle. While it's important to ensure that all student groups have opportunities to enroll in advanced courses, it's also essential to give students the support they need to complete the course and pass the end-of-course exam, so they can earn postsecondary credit.

From 2019 to 2022, completion rates largely stayed steady, with 94% of students in advanced courses completing advanced courses both years, and strong completion rates across both AP and DC.

However, the state has a test-taking gap, which means that many students who complete AP classes don't take the AP test and, thus, lose the opportunity to get college credit for their hard work. It may be that students don't feel ready to take the test, or that the fee to take the test is a barrier.

Overall, only 78% of students who completed their AP course went on to take the AP test in 2021-22. While there was a 3-percentage point growth in AP test-taking from 2019 to 2022, that growth did not extend to Black or Latino students, who continue to have lower test-taking rates.

AP Course Completers Tested, by Race/Ethnicity: SY 2018-19 & 2021-22



● 18-19 ● 21-22

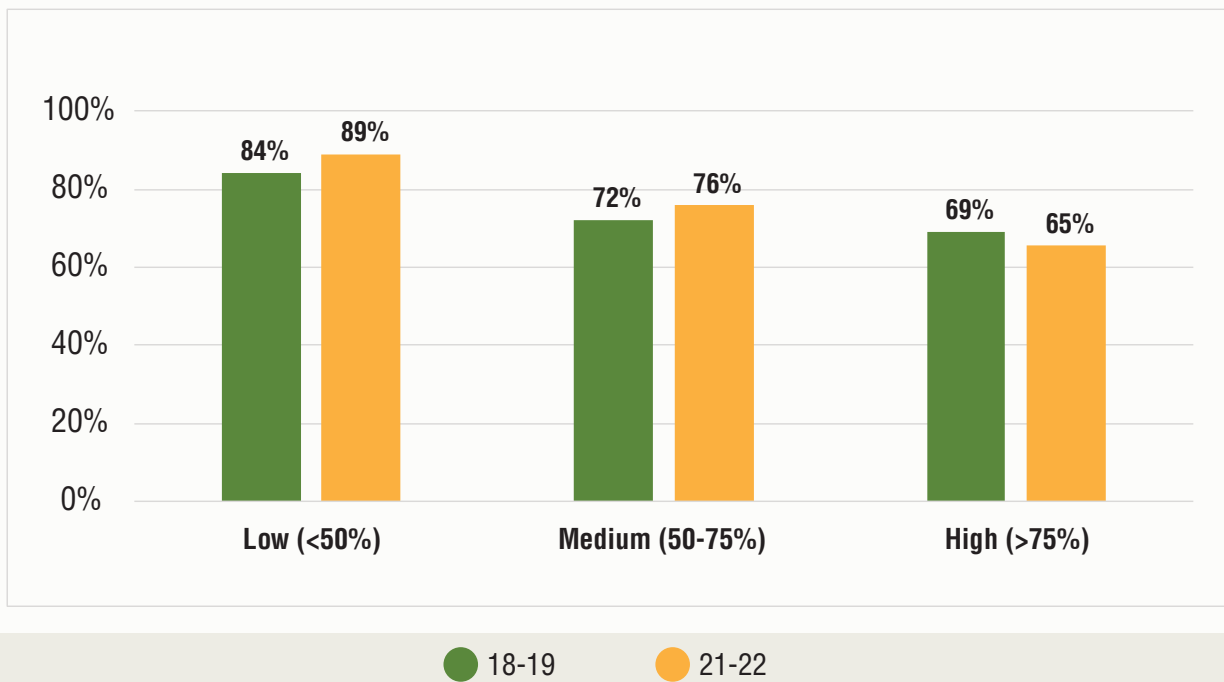
Source: [Kentucky Department of Education's Kentucky School Report Card](#) (Accessed June 2023)

Reading this figure: In 2021-22, 68% of Black students who completed AP courses took an AP test.

Completion in High- and Low-Poverty Districts

Aligned with what we already know about inequities in opportunity for students from low-income backgrounds, districts with high numbers of students from low-income backgrounds see fewer students taking an AP test compared to other districts. In fact, while other districts increased the share of students taking AP tests from 2019-2022, test-taking fell in districts with the most students from low-income backgrounds. As the majority of these districts are in rural areas, this may suggest that rural schools and students need additional support to prepare for the AP test.

AP Course Completers Tested, Districts by % Students From Low-Income Backgrounds:

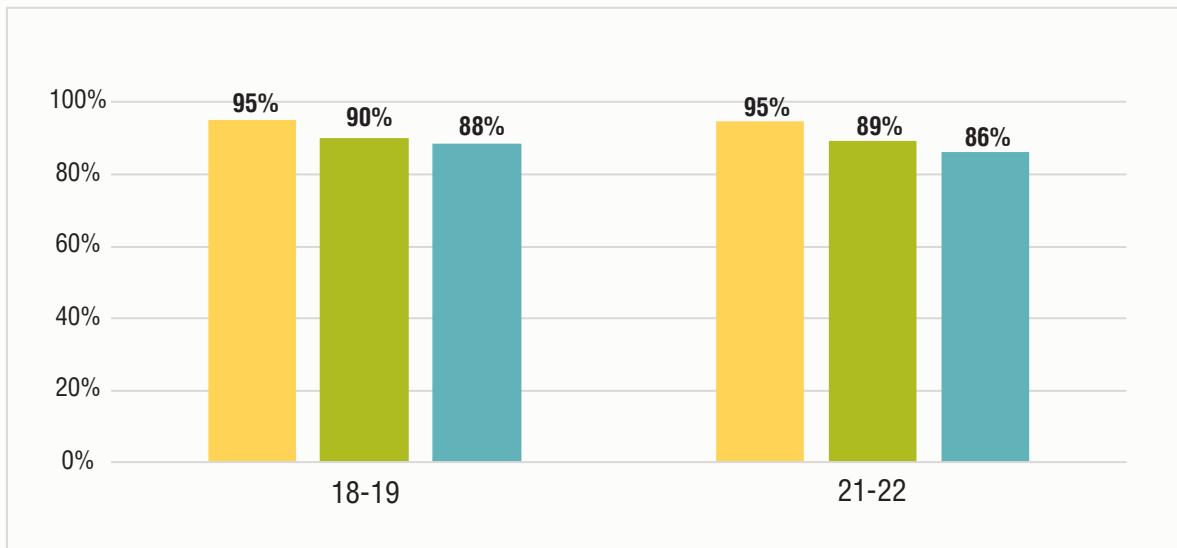


Source: [Kentucky Department of Education's Kentucky School Report Card](#) (Accessed June 2023)

Reading this figure: In 2021-22, 89% of students who completed AP courses in districts with a low percentage of students from low-income backgrounds took an AP test.

Similarly, completion in advanced coursework decreases as need increases in districts. This is most pronounced in Dual Credit courses specifically, where the difference between low and high districts for all students is 9% (95% to 86%).

DC Course Completion, Districts by % Students from Low Income Backgrounds: SY 2018-19 & 2021-22



● Low (<50%) ● Medium (50-75%) ● High (>75%)

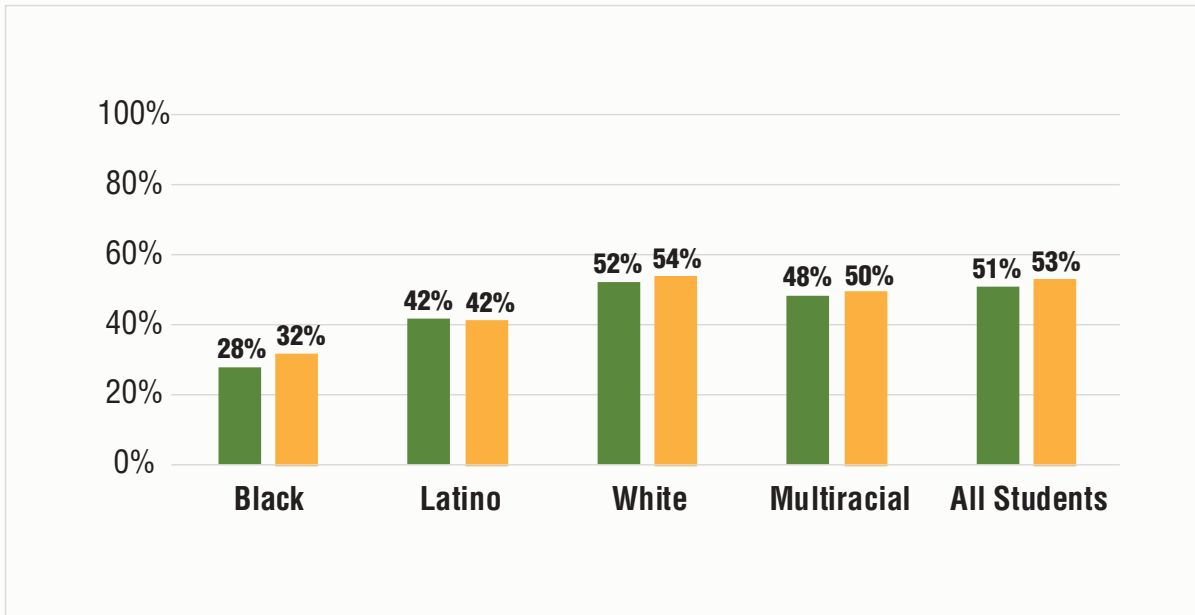
Source: [Kentucky Department of Education's Kentucky School Report Card](#) (Accessed June 2023)

Reading this figure: In 2018-19 and 2021-22, 95% of DC students in low-poverty districts completed their DC course.

AP Proficiency

Just as there is a test-taking gap for all students, with larger gaps for Black and Latino students, there is also a gap in AP proficiency scores — that is, in the passing scores of 3, 4, or 5 received on the AP exam. From 2019 to 2022, AP proficiency rose slightly for all groups — except Latino students — which suggests that more students are receiving enough supports to earn a passing score. While this growth is promising, the current proficiency rates are still concerning. Out of all AP test-takers in 2022, only half (53%) earned a passing score, and about 2 in 5 Latino test-takers and 1 in 3 Black test-takers earned a passing score.

AP Proficiency, by Race/Ethnicity: SY 2018-19 & 2021-22



● 18-19 ● 21-22

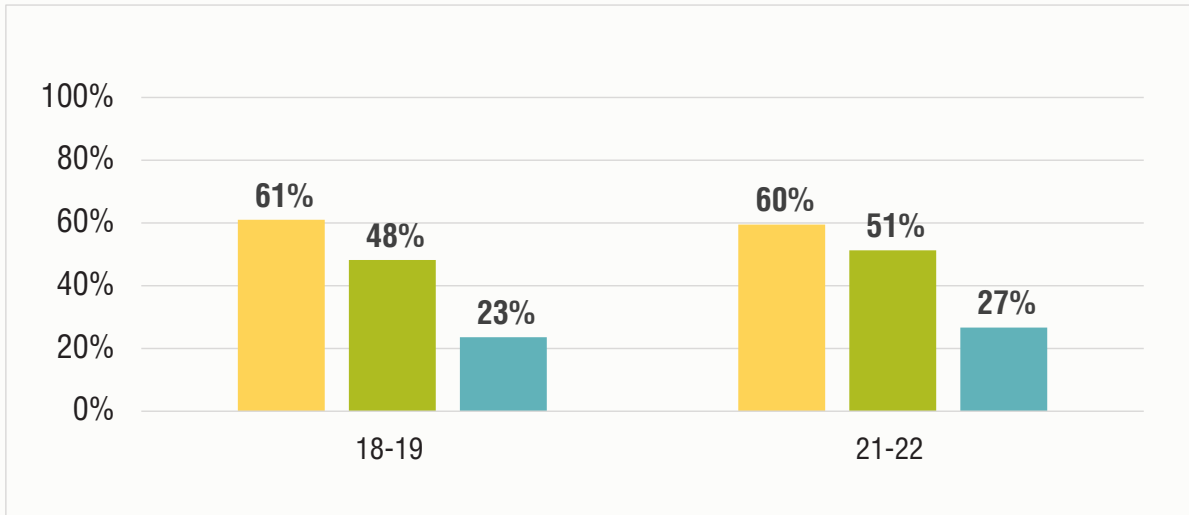
Source: [Kentucky Department of Education's Kentucky School Report Card](#) (Accessed June 2023)

Reading this figure: In 2018-19, 28% of Black students who took an AP test scored proficient.

Proficiency in High- and Low-Poverty Districts

There are large disparities in AP proficiency when disaggregating by the economic make-up of the district. Despite high AP course completion rates across all districts, proficiency rates are highly correlated with economic status.

AP Proficiency, Districts by % Students With Low-Income Backgrounds: SY 2018-19 & 2021-22



● Low (<50%)

● Medium (50-75%)

● High (>75%)

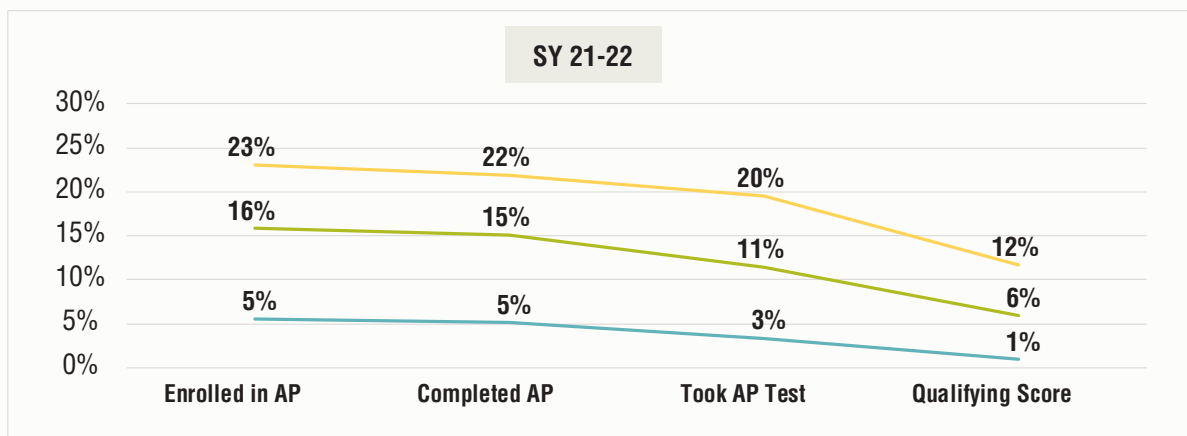
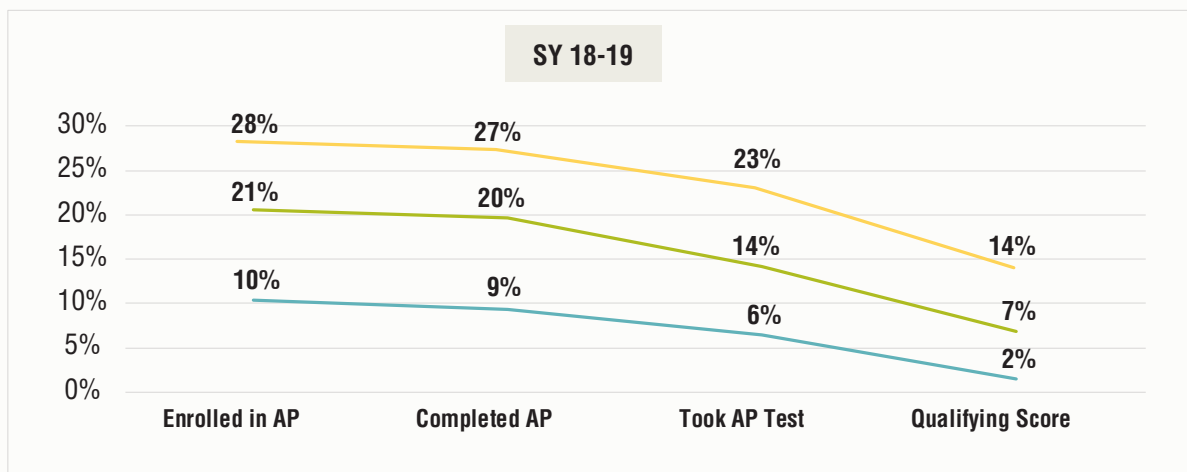
Source: [Kentucky Department of Education's Kentucky School Report Card](#) (Accessed June 2023)

Reading this figure: In 2021-22, 60% of students who took an AP tests in districts with a low percentage of students with low-income backgrounds scored proficient.

The Leaky Pipeline

Ultimately, Kentucky has a leaky pipeline for success in AP courses for all students. While the state saw a dip across the board in enrollment and success from 2019-2022, districts with larger numbers of students from low-income backgrounds struggled most to get students into AP classes, and have them complete AP classes, take AP tests, and earn passing AP scores.

AP Drop-Off, by Districts with % Students From Low-Income Backgrounds:



● Low (<50%) ● Medium (50-75%) ● High (>75%)

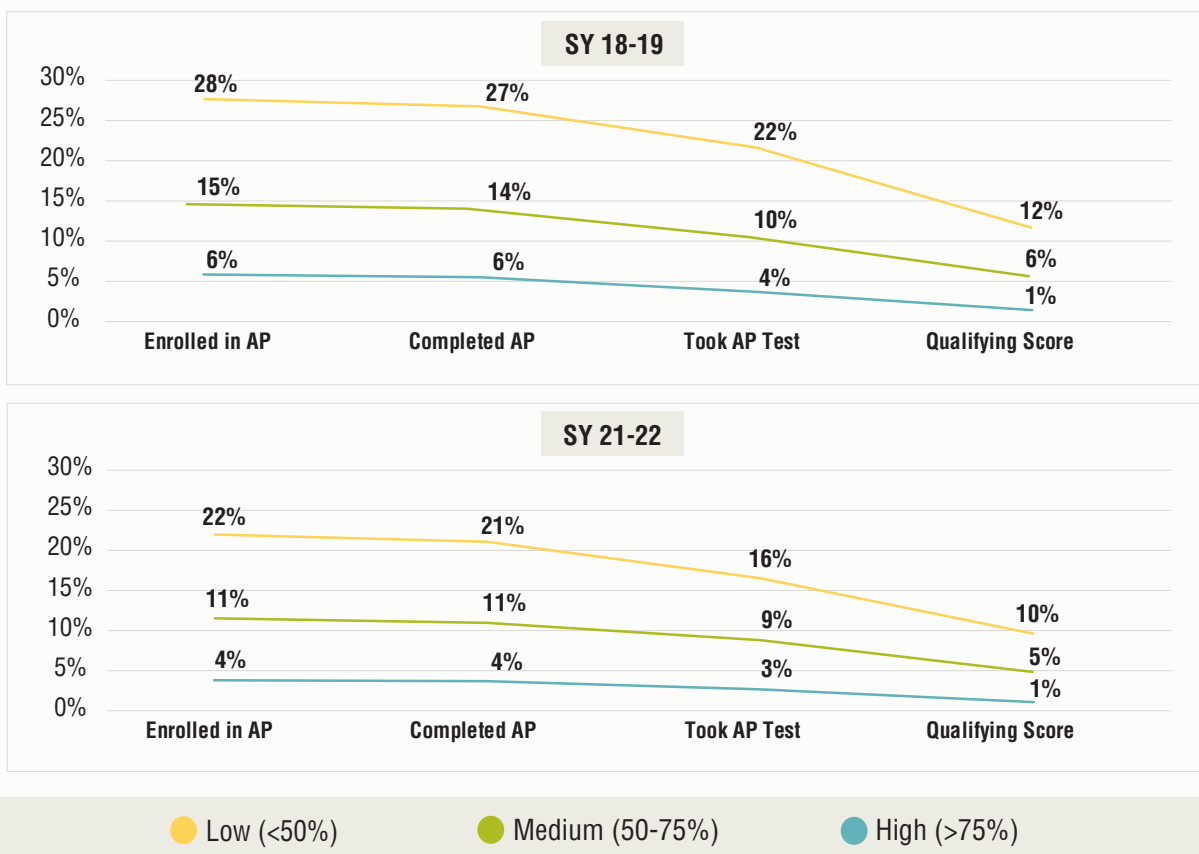
Source: [Kentucky Department of Education's Kentucky School Report Card](#) (Accessed June 2023)

Reading this figure: In 2018-19, 2% of all students in districts with a high percentage of students with low-income backgrounds earned a qualifying score on their AP test.

In districts that serve high numbers of students from low-income backgrounds (the grey line above), only 1 in 20 students were enrolled in an AP class in 2021-22, and only 1 in 100 earned a passing score on an AP exam and got college credit.

Leaky pipelines were prevalent in city, town/suburban, and rural districts. Each also saw a drop in access, completion, test-taking, and success for all students from 2019-2022, with rural districts seeing worse performance than city and town/suburban districts. In rural districts, 4 in 100 students were enrolled in an AP class in 2021-22, and only 1 in 100 earned a passing score. Sadly, it seems that no matter the geographic location these students were in, they often received limited support to earn a passing score on an AP exam and gain college credit.

AP Drop-Off, by Districts with % Students from Low-Income Background:



Source: [Kentucky Department of Education's Kentucky School Report Card, NCES Common Core of Data](#) (Accessed June 2023)

Reading this figure: In 2021-22, 4% of all students living in rural districts are enrolled in AP courses.

To increase equitable enrollment in AP and DC classes, increase the benefits of taking these classes, and save students time and money by earning college credit, Kentucky should:

- Expand access to advanced coursework opportunities
- The state and/or districts can adopt policies whereby students identified for advanced coursework through multiple measures are automatically enrolled in advanced courses, unless their families opt them out. Districts can also adopt open enrollment policies for advanced courses, so that any student who is interested in taking an advanced class can do so.

- For example, in 2017, investigative reporting by the News & Observer in Raleigh, North Carolina, [found](#) that students from low-income backgrounds were being placed in advanced coursework at lower rates than more affluent peers with the same levels of achievement. In response, North Carolina enacted an automatic enrollment policy that guarantees all students who score at the highest level on their end-of-grade math test are placed into an advanced learning opportunity (grades 3-5) or an advanced math course (sixth grade and above) during the following school year. In [2022-23](#), 92% of North Carolina students in grades 6 and above who scored at the highest level on their end-of-grade math test were placed in an advanced math course.
- Districts that serve rural students and large numbers of students from low-income backgrounds should increase the number of classes and seats available in advanced courses. This may mean putting extra resources toward expanding virtual opportunities for students to access AP classes.
- The state can provide grants to districts, schools, or educators to train more teachers to teach AP and DC courses. Meanwhile, districts can take advantage of virtual and summer trainings to train more teachers to teach advanced courses in high-needs districts and schools. [AdvanceKentucky](#) offers PD and resources on its site, but more creative work is needed to recruit and train educators qualified to teach advanced courses.
- Remove barriers to AP test-taking and proficiency
 - The state can provide professional development opportunities to districts, so that principals, teachers, and counselors can learn about traditional barriers to access and success in advanced coursework and how to be proactive in identifying Black and Latino students and students from low-income backgrounds for advanced course opportunities and supporting their success. The state can also require or incentivize districts to support teachers while they are teaching advanced courses by providing real-time, ongoing mentorship from school leaders or master educators and time to collaborate with colleagues across the school and district.
 - For example, New York’s [equitable course access guidance](#) shares best practices for educators and district leaders, which includes course sequences in earlier grades that are designed to make later advanced coursework possible; information on barriers to access, such as resource inequities and racially biased tracking practices; school counselors are trained to engage with families and students of all backgrounds; and student-centered supports in advanced coursework such as tutoring and access to technology are available.
- Support positive school climates and give students a sense of belonging in AP classes
 - Having a sense of [belonging](#) is fundamental to student success in advanced courses. Yet the onus for developing that sense should not be on students belonging themselves — schools and school systems must create welcoming environments that ensure that students of color can fully engage with their peers and classroom content. To do so, schools and districts can invest in recruiting and retaining AP teachers of color, provide guidance to students through near-peer mentors, utilize culturally sustaining curricula, and offer targeted supports — such as free AP Bootcamps in the summer or after-school, in-course tutoring, or separate study sessions for English learners — to students to help build their confidence.
 - For more, see The Education Trust resource on [5 Questions to Ask District and School Leaders About Access to Advanced STEM Coursework in High School](#).

- Expand access to Algebra I in middle school to prepare students for a rigorous sequence of core courses in high school
 - Students who take advanced math in middle school have [more opportunities](#) to excel in advanced math and science in high school, as most advanced math trajectories begin in middle school. Additionally, to meet the application requirements for either of Kentucky's high school STEM academies, students must successfully complete Algebra I, Geometry, and Algebra II by the end of grade 10. Without access to Algebra I in middle school, students cannot participate in this free, enhanced STEM opportunity, so the lack of access to middle school math and science courses is a major barrier.
 - In 2023, the state issued [guidance](#) to districts and schools to promote equitable access to advanced coursework in middle school, which includes guidance for districts and schools on utilizing the [individual learning plan](#) to talk with families about advanced coursework opportunities in middle school. Those conversations and broader information sharing with families must be equitable and provided in multiple modes of communication such as mail, email, phone, virtual, and in-person, in guardians' home languages, to meet the needs of all families.

Endnotes

1. Those we refer to as students from low-income backgrounds are also called economically disadvantaged by the Kentucky Department of Education and refer to the total number of students in each district who are eligible for free or reduced-price benefits.
2. City, rural, and town/suburb classification pulled from the [NCES Common Core of Data \(CCD\)](#), accessed June 23, 2023. Note: Owensboro, Bowling Green, Ashland, and Elizabethtown were also included in town/suburb in this analysis, although they are listed as 'City: Small' in the NCES CCD to differentiate from 'City: Large' (Jefferson and Fayette Counties).