

Raising Rigor, Getting Results
Lessons Learned from AP Expansion



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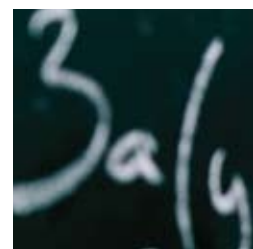
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Executive Summary

Nearly two-thirds of jobs in 2014 will require at least some college, but only 25 percent of students currently earn a bachelor's degree in six years.¹ Advanced Placement (AP), which enables high school students to take introductory college-level courses, is the nation's oldest example of a rigorous, common curriculum. Students who score well on AP exams are more likely to persist in college and earn a degree.

The Advanced Placement Expansion project of the National Governors Association Center for Best Practices (NGA Center) was one component of a large-scale initiative launched in 2005 to redesign the American high school. **Alabama, Georgia, Kentucky, Maine, Nevada, and Wisconsin** received funding to expand Advanced Placement (AP) courses to minority and low-income students at 51 pilot high schools in rural and urban school districts. The NGA Center, working in partnership with the College Board, has demonstrated that it is possible for states to raise rigor and get results at scale.

- The number of students taking AP courses rose 65 percent over two years, and the number of minority and low-income students taking AP exams more than doubled.
- Performance on the AP exam, as measured by the percentage scoring “at mastery”—defined as scoring a 3 or higher on the exam—accelerated at a faster rate than the national average. The percentage scoring at mastery in the pilot sites increased from 6.6 percent in 2005–2006 to 8.3 percent in 2007–2008. During this same period, the national average rose from 14.8 percent to 15.2 percent.

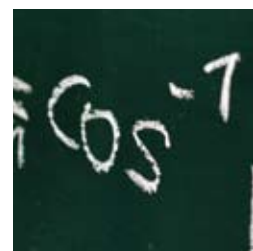
- With 55,000 students, together the 51 pilot high schools are large enough to be thought of as a state. If taken as a “state,” the NGA Center pilot schools outperformed similarly sized states, which only saw performance grow from 6.2 percent at mastery to 6.5 percent at mastery during the same period.

These results were achieved, in part, by providing the six states with a framework for thinking about program and policy changes. The Advanced Placement Expansion project gave states three strategies: how to expand access to AP courses, build teacher and student capacity, and create incentives for schools and students.

In the past, most states have allocated new AP dollars primarily to building teacher capacity. States that take a more comprehensive approach and combine all three strategies—access, capacity, and incentives—will see the most prominent effect on AP course enrollment and success.

Nationwide, the potential for AP expansion is considerable. Hundreds of thousands of students have the ability, but lack the opportunity, to take and succeed in AP courses. Governors interested in increasing this opportunity can start by setting new goals for Advanced Placement, so one-third of all high school students take an AP course and one-quarter of them score at mastery.

Pursuing the three strategies and setting these goals would enable states to grow Advanced Placement courses to serve as many as 1 million students by the class of 2014. This would help raise college graduation rates and help maintain the nation's workforce quality and economic competitiveness.



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The Case for Opening Doors to Advanced Placement Courses

Nearly two-thirds of jobs in 2014 will require at least some college, but only 25 percent of students currently earn a bachelor's degree in six years. Students who score well on the exam are more likely to persist in college and earn a degree. Yet hundreds of thousands of smart high school students lack the opportunity to get the head start on college that an AP course provides.

Why AP Courses Are Highly Regarded

The NGA Center's Advanced Placement Expansion project was one piece of a large-scale initiative begun in 2005 to redesign the American high school. Along with Jobs for the Future's *Early College Initiative* and state dual-enrollment programs, Advanced Placement (AP) is one of several approaches to expand college-level learning opportunities for high school students. Of these three efforts, AP is the oldest and serves the most students. AP is held in high regard for at least three reasons:

- AP course syllabi and exams are voluntary and created by teachers;
- AP exams are scored by external panels of teachers; and
- The incentive to do well on AP exams places teachers and students on the same side.

Committees of college faculty and experienced AP teachers design each of the 33 AP courses. The recent, rapid growth in the volume of AP courses created the need to assure colleges that the College Board can consistently maintain the high quality

of its AP programs. In 2007, 140,000 high school teachers submitted syllabi to college faculty as part of a course audit.² To label a course "AP," a high school must demonstrate how the course meets or exceeds college-level curricular and resource requirements. Teachers are not required to teach a standardized "AP curriculum," however.

AP exams are regularly benchmarked against the performance of students in introductory college courses. Although they do not know it, college freshmen take pilot versions of these exams. An AP score of 5 is based on standards required for a grade of A in the corresponding college course; a 4 is comparable to college grades of A-, B+, and B. An AP score of 3, which is considered "at mastery" for high school students, is comparable to college grades of B-, C+, and C.

Each AP exam includes multiple-choice and free-response questions that determine whether students have achieved an in-depth understanding of a subject. The exam, as well as the preparation for it, offers teachers and students unprecedented diagnostic feedback. Each year, the College Board publishes excerpts from the free-response section of each exam, along with actual student responses and scoring commentary. Such feedback helps teachers and students learn how they are performing in relation to challenging standards. It also helps them learn how they could improve their performance.

Students are motivated by the opportunity to earn early college credit and improve their chances of college admission. Nearly one-third of colleges and universities use AP as a criterion to determine scholarship recipients.³ Teachers benefit from the prestige of high scores in a profession where signals of accomplishment are all too rare.



Whether a student earns a college degree depends foremost on the intensity of the high school curriculum, especially if that student takes at least one Advanced Placement course.⁴ Merely enrolling in an AP course is not enough, however; high school students must score well on the exam to do well in college.⁵ Studies of college students in **California** and **Texas** show that scores on the AP exam are “remarkably strong predictors” of performance in college.⁶ Students who take AP courses and exams are much more likely than their peers to complete a bachelor’s degree in four or fewer years.⁷

The Pursuit of Excellence and Equity

Elite institutions are responsible for Advanced Placement’s origins.⁸ During the 1950s, private high schools saw their share of enrollment at Ivy League universities drop. To counter this trend, a consortium of private schools developed courses that would offer smart and ambitious high school students a head start on college.⁹

During the past decade, the College Board, working with leading states and school districts, has advocated that AP be open to all interested students. Terry Grier, the superintendent of schools in San Diego, California, is often credited with the phrase, “AP is not just for the elite; it’s for the prepared.” Since 2000, the federal government’s AP Incentive Program has provided \$191 million in grants to 140 states and districts, mostly to increase AP access and success among underrepresented students.¹⁰ Federal and state funding, combined with support from the College Board, eliminates the \$86 exam fee for students from low-

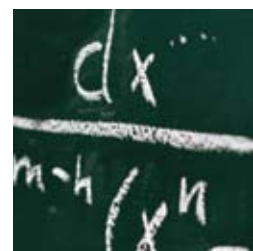
income families. The College Board’s official equity policy statement calls for “schools to make every effort to ensure that their AP classes reflect the diversity of their student population.”¹¹

As a result, AP enrollment has increased by nearly 72 percent in the past seven years. In the class of 2000, 405,000 seniors took at least one AP exam during their time in high school. In the class of 2008, that number was 758,000. Among African American students, the number of AP exams with scores at mastery has grown from 18,000 to 30,000; among Latino students, the number of AP exams with scores at mastery has grown from 63,000 to 110,500.¹²

Notwithstanding this progress during the past eight years, substantial equity gaps persist in course enrollment and success on AP exams:

- While 51 percent of students from high-income households have taken an Advanced Placement or International Baccalaureate class, only 16 percent of low-income students have had the opportunity;
- While African American seniors represent 14 percent of all high school students, they account for only 3.5 percent of students scoring at mastery on the AP exam; and
- Approximately 65 percent of rural high school students attend schools that minimally offer or do not offer AP.¹³

The NGA Center’s Advanced Placement Expansion project sought to determine what state policies and practices are needed to get more low-income and minority students succeeding at scale in rigorous courses such as AP.



“AP is not just for the elite; it’s for the prepared.”

Accomplishments of the Advanced Placement Expansion Project

The NGA Center partnered with the College Board to work in one urban and one rural school district in six states—**Alabama, Georgia, Kentucky, Maine, Nevada, and Wisconsin**—with a total of 51 high schools. The project increased the number of AP courses by 47 percent, and 826 teachers and administrators attended intensive professional development to prepare themselves to teach the courses.

Schools participating in the project doubled minority student enrollment in AP courses (see Table 1). Approximately 3,500 more students were taking AP courses in 2007–2008 than at the start of this project in 2005–2006; minority students comprised approximately 2,500 of the 3,500 students. All the project states had at least one high school responsible for the tremendous growth in AP enrollment (see Table 2). Moreover, 70 percent of students enrolled in AP went on to take the exam. This percentage is slightly less than the national average of 75 percent,¹⁴ but it is still impressive.

Performance on the AP exam, as measured by the percentage of students at mastery—defined as a score of 3 or higher—accelerated at a faster rate than the national average. In all project schools, the percentage at mastery increased from 6.6 percent in 2005–2006 8.3 percent in 2007–2008. During this same period, the national average rose from 14.8 percent to 15.2 percent. (See, also, Calculating AP Performance in a More Equitable Manner.)

The 51 schools participating in this project, with 55,000 students, can be thought of as a state. The pilot schools outperformed the closest states of comparison. States with a similar number of high school students saw AP performance grow at a much slower rate, from 6.2 percent at mastery in 2005–2006 to 6.5 percent at mastery in 2007–2008.

The Advanced Placement Expansion project also helped two states distinguish themselves nationally. In 2008 **Maine** experienced the largest single-year increase in the percentage of high school seniors scoring at mastery (2.3 percent). **Alabama** saw the largest increase in the percentage of African American students scoring at mastery (7.1 percent, up from 4.5 percent in the class of 2003).¹⁵

These results were achieved, in part, by providing states with a framework for thinking about program and policy changes. This framework is grounded in the belief that what holds students and schools back from AP courses is a lack of access, misaligned incentives, and the absence of teacher capacity-building efforts and student support. All six states used data differently and employed new strategies to recruit minority and low-income students. Based on their experiences, it seems that combining the three strategies works best.

TABLE 1. Increases in AP Enrollment by Project State

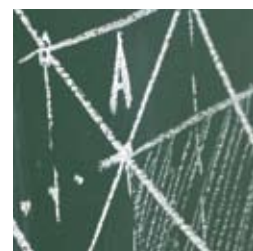
Project State	Number of Students in AP Courses 2005–2006 (Baseline)	Number of Students in AP Courses 2006–2007	Number of Students in AP Courses 2007–2008	Two Year Percent Change at Pilot Schools	Percent of Minority Enrollment in the State	Percent of Minority Enrollment in Pilot Schools	Number of Minority Students in AP Courses 2005–2006 (Baseline)	Number of Minority Students in AP Courses 2006–2007	Number of Minority Students in AP Courses 2007–2008	Percent Change at Pilot Schools
Alabama	202	357	293	45%	36%	65%	64	152	136	113%
Georgia	1237	2018	2173	76%	36%	37%	364	601	642	76%
Kentucky	1343	1927	2213	65%	11%	19%	93	151	322	246%
Maine	371	631	742	100%	3%	16%	12	33	52	333%
Nevada	710	1169	1661	134%	29%	81%	472	610	1023	117%
Wisconsin	1333	1532	1476	11%	10%	29%	203	255	310	53%
Project Totals	5196	7634	8558	65%	25%	41%	1208	1802	2485	106%

Source: Data reported by the project states.

TABLE 2. Top Twenty Increases in AP Enrollment by Pilot School

Rank	Pilot School	Project State	Percent Change	2005–2006 AP Enrollment	2007–2008 AP Enrollment
1	Oak Hill High School	Maine	9400%	0	94
2	Columbia High School	Alabama	1367%	6	88
3	Morgan County High School	Georgia	1018%	22	246
4	Leavitt Area High School	Maine	214%	49	154
5	Desert Pines High School	Nevada	213%	87	272
6	Lisbon High School	Maine	184%	32	91
7	Jefferson County High School	Georgia	176%	34	94
8	Duluth High School	Georgia	137%	212	502
9	De Soto High School	Wisconsin	132%	22	51
10	Pecatonica High School	Wisconsin	110%	10	21
11	Lafayette High School	Kentucky	109%	355	742
12	Rockdale County High School	Georgia	97%	187	369
13	Pike Central High School	Kentucky	94%	50	97
14	Lowndes High School	Georgia	91%	139	266
15	Bryan Station High School	Kentucky	84%	134	246
16	Canyon Springs High School	Nevada	77%	193	342
17	Portland High School	Maine	75%	68	119
18	Stephens County High School	Georgia	73%	83	144
19	Madison East High School	Wisconsin	63%	127	207
20	Ed W. Clark High School	Nevada	61%	372	599

Source: Data reported by the project states.



Calculating AP Performance in a More Equitable Manner

What is the best way to calculate AP performance? In the past, schools divided the number of students scoring at mastery by the number of students taking the AP test. This practice has been out of favor for a decade because it encourages schools to funnel into AP classes only students who a school is confident will do well on the exam. A school can easily have a 100 percent pass rate if it allows only the elite students to take the AP exam.

To expand access to AP among minority and low-income students, the College Board encourages schools, districts, and states to use the entire student body as the denominator in calculating AP performance. This creates an incentive for schools to open challenging classes to as many students as possible.

Expanding Access

Teachers and guidance counselors are often overly rigid gatekeepers for AP courses, permitting access only to those they think are likely to do well on the exam. The NGA Center encouraged schools to drop many course prerequisites and use a student's PSAT scores to determine who has "AP Potential" (i.e., which student is likely to score at mastery but may not be seen as the traditional AP student). Across the project states, 60 percent of new AP students were discovered through AP Potential.¹⁶

Talented minority and low-income students often hesitate to enroll in AP courses because they fear being socially isolated. The NGA Center worked with states to use strategies for teachers and guidance counselors outlined in the College Board publication *Opening Classroom Doors: Strategies for Expanding Access to AP*. For example, schools were encouraged to recruit minority students in groups, so students know they can turn to their peers for academic support.¹⁷ At several high schools in **Georgia**, AP students who were also athletes and cheerleaders were asked to recruit new AP students. In addition, principals personally contacted students and their parents to encourage enrollment.

High schools also developed their own strategies for expanding access to AP courses. Poland High School in **Maine** and Clark High School in

Nevada required all sophomores scoring "proficient" on a standardized test to take AP English Composition as juniors, followed by AP English Literature as seniors. To ensure the preparation of Clark High School students, sophomores were given a double period of English (one and one-half hours). They also took a class through AVID (Advancement Via Individual Determination), which provided them with extra tutoring and study skills to succeed in college-preparatory classes.¹⁸ Students at Deering High School in **Maine** surveyed one another to see which AP courses they wanted. The survey results revealed a previously unknown interest in AP computer programming. While **Maine** schools had planned to add 16 new AP courses, it ended up adding 30.

Alabama, **Kentucky**, and **Nevada** used virtual learning technology to greatly expand AP in rural areas. Schools in these states have an especially hard time attracting highly qualified science teachers, so it was impossible for some of them to offer an AP Biology class. Using virtual AP teachers enabled these schools to pool their students efficiently across the state. In **Nevada**, virtual learning is poised to change the way students earn course credit. In online courses offered at Clark County Virtual High School, credit is not awarded for the amount of time students spend in seats; it is awarded for successfully fulfilling course requirements and taking the AP exam.

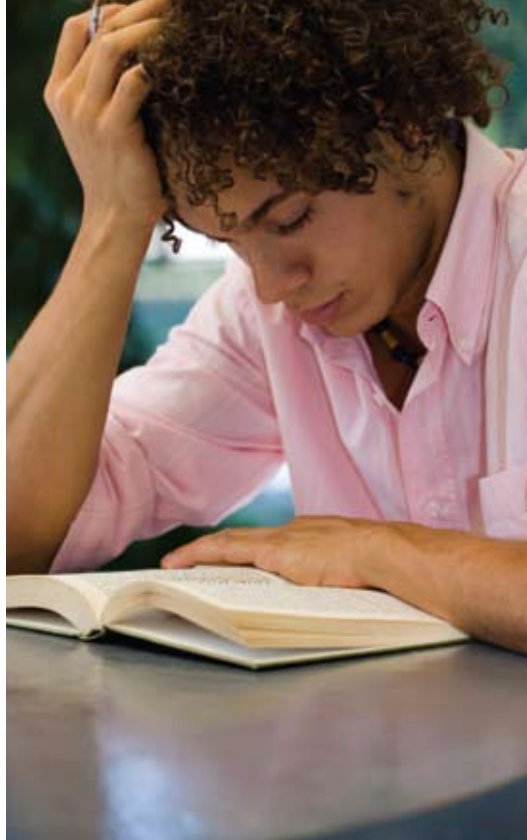
Building Teacher Capacity and Offering Extra Support for Students

Advanced Placement courses require teachers to create college-level curricula and give new types of exams, so new investments are often required in their professional learning. The NGA Center provided opportunities for extended learning at a cost of about \$300 per teacher. **Nevada** and **Wisconsin** institutionalized a weeklong statewide summer institute for teachers. **Kentucky** prepared the pipeline of middle school students by using the College Board's SpringBoard curriculum.¹⁹ **Alabama** did so by establishing vertical teams of middle school and high school teachers. **Maine** set up a mentoring initiative for new AP teachers as part of a larger effort to build a college-going culture. Mentors were paid a \$2,500 honorarium and met officially three times per year with new AP teachers. Those who delivered extra workshops geared to teachers' immediate needs were paid an extra \$500 per day.

The use of PSAT data to open doors and make AP more accessible raised a legitimate concern for some teachers in the project that their students might not be fully prepared for AP. Professional development in **Georgia** and **Wisconsin** addressed this concern head on by showing teachers how to diagnose students' needs relative to their knowledge of content and procedures. Teachers then learned how to use this information to "differentiate" their instruction for all students.²⁰

States also bundled AP with extra support for students. In **Nevada**, the Silver Star Institute prepared 300 students during the summer to get them ready for the rigors of AP. Students spent three weeks in English Prep and three weeks in Math Prep. In **Georgia**, **Kentucky**, and **Nevada**, several schools assigned students to "double blocks," which gave them 90 minutes per day in AP for the entire year. These states also supported students with AVID tutorials, which afford students collaborative study groups, writing assistance, and Socratic seminars.

The extra training for teachers and support for students can help convince traditional AP teachers about the benefits of expanding access.

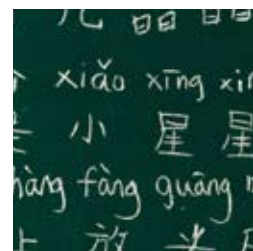


They often worry that expansion will water down classroom performance on the exam and make them appear less successful. "I have colleagues who tell me half of the kids in AP don't belong," said an AP English teacher.²¹ "We take the high flyers and the struggling students alike. I tell them, 'These kids can think. Even if the writing skill isn't there yet, AVID aligns with what we're trying to do.'"

Creating Incentives for Students and Schools

Schools in many of the project states created an incentive for students to take Advanced Placement courses by guaranteeing them an extra grade point for their effort; a B in an AP course, usually worth three points, would count for four points, or an A in a regular course. This eliminated many students' fear that taking a more challenging class would harm their grade point average.

Students interviewed for the project expressed different reasons for taking AP classes, even if they could earn a high school diploma without working so hard. An AP Chemistry student said, "This class goes beyond the simple questions like, 'What's a proton?' This class allows me to prove how much I can really do." "AP is time consuming. I'm very involved in





sports, and it's difficult for me to get all my reading done. But the discussions here are far more in-depth than in other classes," noted an AP English student. An AP Government student admitted, "My grades aren't so hot, but this class prepares you for the writing you have to do in college."

The successful schools in this project created a culture of high expectations through AP, which served as another incentive for students. "You do have a lot of whining but not quitting," added an AP U.S. History teacher. "It's not easy to quit at

this school. The AP kids identify with one another. If you quit, you lose the social interactions."

Kentucky did the most to create incentives for schools to offer and students to take additional AP courses. In April 2008, Governor Steve Beshear signed legislation that creates financial incentives for public schools to make AP science and math courses available. It also provides supplemental college scholarship awards for low-income students based on their AP exam performance.²² (See, also, Other Changes and Grant Activity in the Six Project States.)

Other Changes and Grant Activity in the Six Project States

Most of the policy changes supported by the project were related to building teacher capacity. Governors in **Alabama**, **Georgia**, and **Wisconsin** all increased their state budgets for AP. Wisconsin added \$600,000 and Alabama added \$3.5 million over two years. **Georgia** added \$3.3 million to cover the cost of additional test fees.

Work under the NGA Center Advanced Placement Expansion project positioned **Maine** and **Wisconsin** to receive federal Advanced Placement Incentive Program grants. With this funding, these states can continue their focus on minority and low-income students. The project also positioned **Alabama** and **Kentucky** to receive six-year grants totaling \$13 million from the private National Math and Science Initiative. As part of this effort, students will be able to earn several hundred dollars for each AP test score they earn at mastery.



State Strategies to Improve AP Enrollment and Success

Although this project has demonstrated that it is possible to expand access to Advanced Placement courses and improve achievement for minority and low-income students at scale, AP has not begun to reach its full potential nationally. Sixteen states have fewer than 10 percent of high school seniors scoring at mastery on the AP exam (see Figure 1). At the typical U.S. public high school, only 5 percent of students take at least one AP exam. Even in schools that offer AP exams in three of the four core content areas, only 7 percent of students take an exam.²³

To improve AP course enrollment and success—an intermediate step on the path to increasing college graduation rates—governors should focus on key policy and program levers aimed at expanding access, building capacity and offering extra support, and creating incentives.

- **Expanding access.** States should ensure that every high school equitably offers Advanced Placement classes. Alternatively, states should require students to have a college-level learning experience to graduate from high school.
- **Building capacity and offering extra support.** States should invest or reallocate training dollars so teachers and students are prepared for the rigors of AP.
- **Creating incentives.** States should consider tying state scholarship money to taking an AP course, which signals to students what it truly means to be ready for college.

Expanding Access

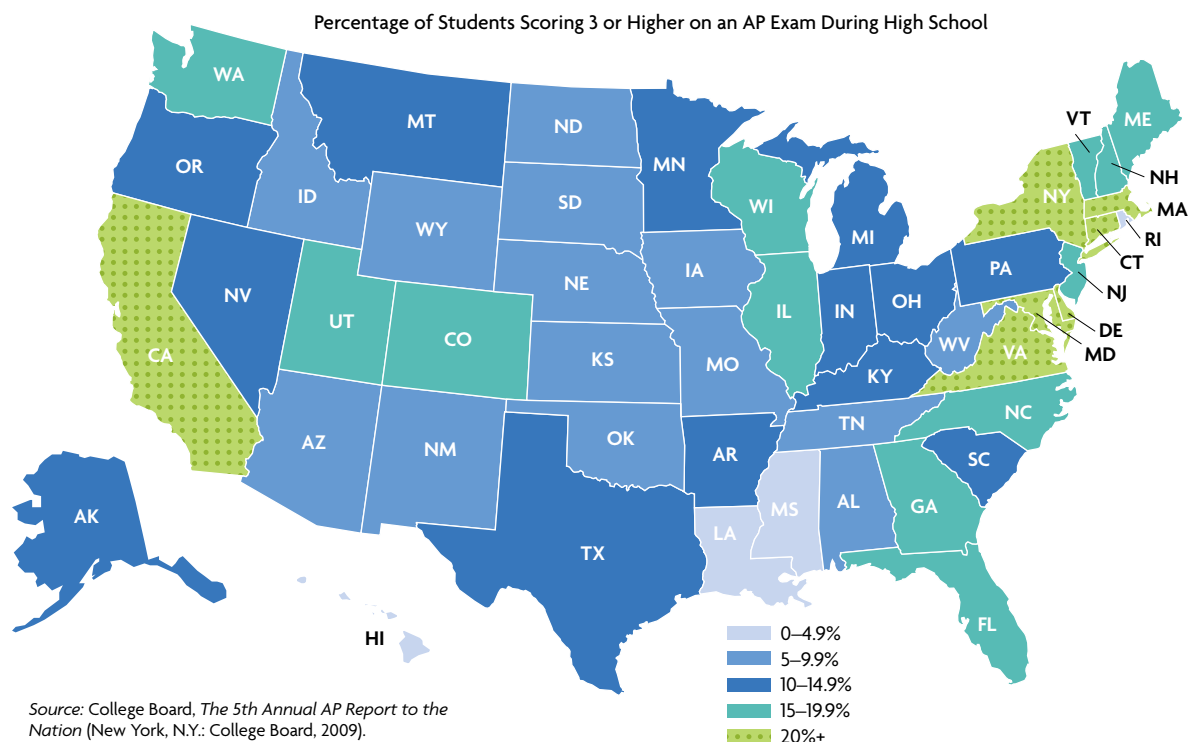
The number of students who could benefit from policies aimed at expanding access is staggering. AP Potential, a part of the NGA Center's project, used PSAT scores to determine students who are likely to score at mastery but who may not be seen as the traditional AP student. For example, in **Wisconsin** AP Potential has identified 28,000 students whose PSAT scores suggest they would do well in AP classes, but who are not enrolled in AP classes. Nationally, 600,000 students have PSAT scores that indicate they would be likely to succeed in AP Calculus and AP English Literature, if only they had the opportunity to access these courses.²⁴ The demand for more students to take and succeed in AP courses already exists.

Strong state policies aimed at expanding access to AP courses are evident in **Arkansas** and **West Virginia**, which require every high school to offer at least four AP classes in the core content areas: English, mathematics, science, and social studies. Alternatively, a state could follow the example of **Michigan**, **Minnesota**, and **New Mexico**, which require every student to have a college-level learning experience before they can graduate from high school.

States with especially large rural populations can deliver AP courses online at a cost of \$300 per student, once the technology infrastructure is in place. APEX virtual learning has grown from serving 8,400 AP students nationwide in 2004 to serving 30,200 AP students nationwide in 2007.²⁵ In 1997, Florida Virtual High School offered one AP class online; it now offers 11 courses that have been licensed to other states.

**Nationally,
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FIGURE 1. Percentage of Students Scoring at Mastery on the AP Exam by State



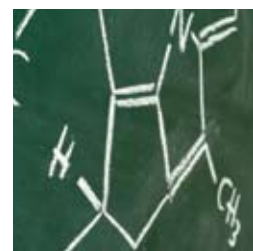
The intent is to change the way states award credit, moving away from seat time and toward demonstration of student mastery. **Florida** Virtual High School's motto is "Any time, any place. Any path, any pace."²⁶

Building Teacher Capacity and Offering Extra Support for Students

All of the project states invested heavily in building teacher capacity to ensure teachers have the deep content knowledge needed to teach AP classes. **Arkansas** offers statewide professional learning academies to improve teachers' knowledge and instructional methods. Its weeklong academies meet the requirements of effective professional development by focusing intensely on subject matter and being aligned with instructional goals and materials. Teachers say the feedback they get from reviewing students' exam

scores, especially the free-response questions, is some of the most powerful professional learning of their careers. Teachers who go on to earn 12 hours of postgraduate credits are also awarded an AP Endorsement by the state.

For students, especially minority and low-income students, capacity building means ensuring they are adequately prepared for and supported while taking AP classes. Strategies include tighter alignment of middle and high school curricula, so students are prepared for the rigors of AP; summer prep programs; and social support networks such as AVID. **Maryland's** leading-state status stems, in part, from a vertically aligned curriculum, which ensures middle school students take rigorous courses so AP classes are less intimidating. **Texas** has the largest statewide offering of pre-AP courses and encourages students to take them by awarding a one-half point increase in a student's grade point average.





Creating Incentives for Students and Schools

Are cash incentives needed to attract students to more challenging courses? **Florida** Governor Jeb Bush created an incentive that operates on two tiers. Schools receive \$50 for each student score at mastery on the AP exam; 80 percent of this money is allocated for additional teaching positions to support continued expansion of AP. The remainder can be distributed as cash bonuses to AP teachers, who also receive \$50 for each student score at mastery, with bonuses capped at \$2,000 per year.²⁷

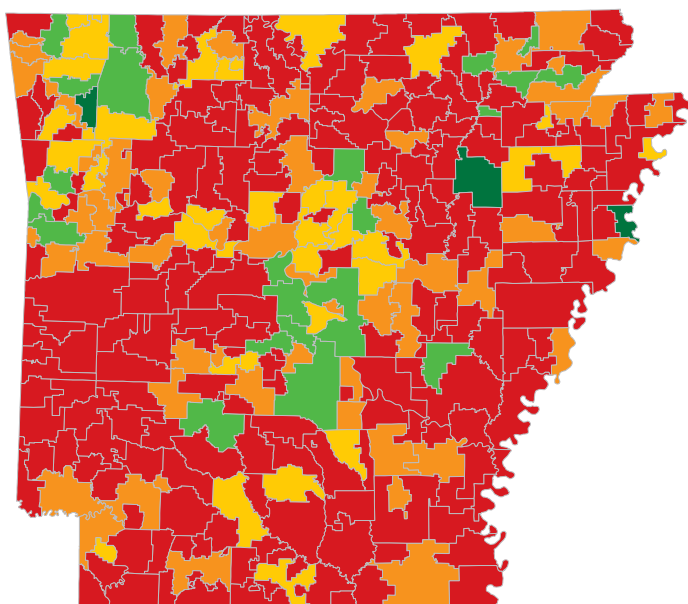
The Advanced Placement Incentive Program in Dallas, **Texas**, offered cash bonuses to teachers and students and saw increases in college entrance exam scores. However, AP course enrollment increased for all AP courses, even if rewards were only given for certain subjects.²⁸ This suggests that simply engaging in a comprehensive effort to expand access to and increase success in AP courses may be incentive enough to raise achievement.

Kentucky uses a different incentive approach. It ties the receipt of additional college scholarship money to high school seniors' performance in AP math and science courses. **Arizona** provides student tuition waivers to state universities for students who score well on two AP exams and have a grade point average of at least 3.5. States could also require students to complete an AP course to be eligible for a college scholarship. Because AP students are waived out of introductory college courses and are more likely to graduate in four years, students and their families can reduce their college costs.

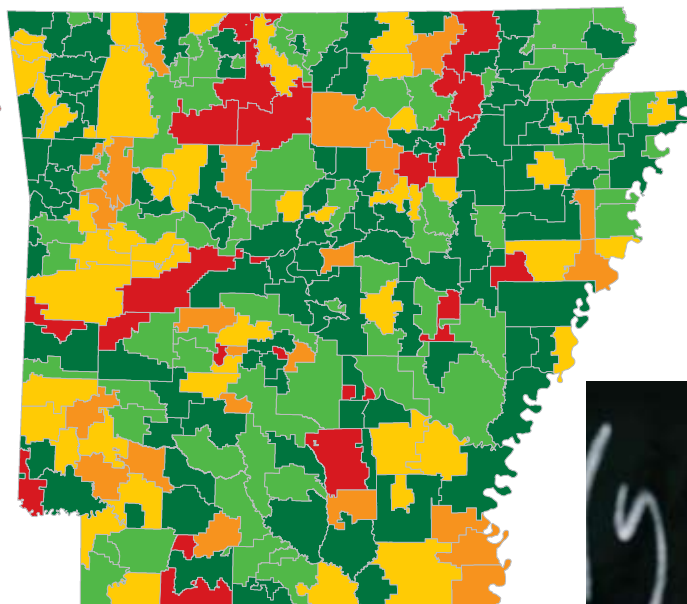
Federal and state policies, along with the College Board's AP Fee Reduction program, have eliminated any *disincentive* low-income students could have when faced with the prospect of paying \$86 for each AP exam. **Maryland** and **Virginia** have created an incentive for students to do well by allowing them to opt out of state end-of-course exams if they score a 2 or higher on an AP exam.

FIGURE 2. Change in Arkansas' AP Enrollment Before and After State Action

Advanced Placement Participation for the 12th Grade Cohort by District of the Public High School Class of 2002–2003 as a Percent of Grade 12 Enrollment



Advanced Placement Participation by District of the Public High School Class of 2008 as a Percent of Grade 12 Enrollment



Sources:

- 2002–2003 NCES 12th Grade District Data
- 2002–2003 College Board 2002–2003 Advanced Placement Cohort Data
- 2001 School District boundary files (from Proximity)

Note:

The AP Cohort data represents all public students from a given year's public high school class who took an AP exam at any point in high school. Images courtesy of the College Board.

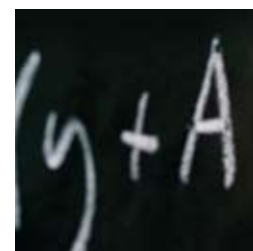
Advanced Placement Participation

- Less than 1%
- 1–9%
- 10–19%
- 20–29%
- 30% or greater

Combining All Three Strategies

Arkansas is one of only a few states that have combined all three strategies—expanding access, building capacity, and creating incentives—into public policies. A school finance equity case led state legislators in 2002 to discover differences in AP offerings at small and large high schools. Of the 50 smallest high schools in the state, only nine offered at least one AP course. Of the 50 largest schools, 49 offered multiple courses. This led the state legislature to require more

AP courses and build teacher capacity to teach the courses. Yet the state did not stop there. It combined these efforts with an incentive program that awards schools \$50 for each student score at mastery on an AP exam. Schools can use the bonuses to purchase materials and equipment and to pay for additional training. As a result of the combined policies, AP participation is now evenly spread across the state. Moreover, Arkansas is on its way to becoming one of the nation's leaders in AP enrollment and achievement (see Figure 2).



How Far States Can Go: One Million AP Students by the Class of 2014

In his remarks to the National Academy of Sciences in April 2009, President Barack Obama said, “The nation that out-educates us today will out-compete us tomorrow. In the next decade—by 2020—America will once again have the highest proportion of college graduates in the world.”

A key first step in meeting this ambitious vision is for state policy to support more college-level learning opportunities for high school students. Advanced Placement is a proven strategy of introductory college-level coursework tightly aligned to common, externally developed exams. Students who score well on AP exams are more likely to persist in college and earn a degree. Teachers also benefit when their students do well on these exams.

The NGA Center’s Advanced Placement Expansion project has proven that it is possible to raise rigor for minority and low-income students and to do so at a large scale. Yet hundreds of thousands of smart and ambitious students lack the opportunity to get a head start on college.

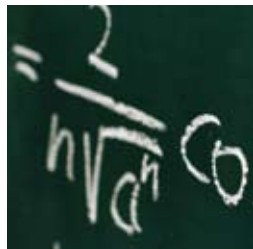
Governors interested in expanding college-level learning opportunities could set goals for how much they want to grow AP course enrollment and success during the next five years. To achieve the target goals, states would need to enact comprehensive policies to expand access, build capacity and offer extra support, and create incentives.

The leading AP states in the nation—**California, Connecticut, Maryland, Massachusetts, New York, and Virginia**—have between 33 percent and 40 percent of their high school seniors taking at least one AP course and between 20 percent and 25 percent of their students scoring at mastery. If, during the next five years, governors were to set these goals for their state—a third of all students taking AP courses and a quarter performing at mastery—AP would grow to serve an estimated 1 million high school seniors in the class of 2014, with 750,000 students scoring at mastery. (See Table 3 for state-by-state AP growth targets.) Meeting these goals would help raise college graduation rates and help maintain the nation’s workforce quality and economic competitiveness.

TABLE 3. State-by-State Goals for Expanding AP to 1 Million Students by the Class of 2014

	Students Talking AP Exams (Class of 2008)	Students at Mastery (Class of 2008)	Predicted High School Enrollment 2014	33% Enrolled in AP (Class of 2014)	25% Scoring at Mastery (Class of 2014)
Alabama	5,327	2,691	37,848	12,490	9,462
Alaska	1,621	1,063	8,007	2,642	2,002
Arizona	10,573	5,985	64,191	21,183	16,048
Arkansas	9,721	3,102	27,088	8,939	6,772
California	119,595	78,509	403,375	133,114	100,844
Colorado	14,779	9,186	48,354	15,957	12,088
Connecticut	10,933	7,908	40,699	13,431	10,175
Delaware	1,943	1,000	7,071	2,333	1,768
Florida	53,953	28,784	147,340	48,622	36,835
Georgia	24,494	13,153	83,855	27,672	20,964
Hawaii	1,849	892	10,403	3,433	2,601
Idaho	2,432	1,596	15,480	5,109	3,870
Illinois	30,522	20,297	135,313	44,653	33,828
Indiana	12,478	6,299	60,498	19,964	15,124
Iowa	4,484	2,951	32,360	10,679	8,090
Kansas	4,116	2,591	28,537	9,417	7,134
Kentucky	7,925	3,984	35,932	11,858	8,983
Louisiana	2,538	1,118	32,266	10,648	8,066
Maine	4,223	2,554	13,124	4,331	3,281
Maryland	21,783	13,666	63,426	20,930	15,856
Massachusetts	18,365	13,128	65,661	21,668	16,415
Michigan	22,474	14,458	109,300	36,069	27,325
Minnesota	13,569	8,556	59,202	19,537	14,801
Mississippi	3,157	976	21,605	7,130	5,401
Missouri	6,570	3,936	57,357	18,298	14,339
Montana	1,635	1,088	9,104	3,004	2,276
Nebraska	2,233	1,348	18,194	6,004	4,548
Nevada	4,949	2,716	21,554	7,113	5,389
New Hampshire	3,053	2,245	14,101	4,653	3,525
New Jersey	23,871	17,035	103,660	34,208	25,915
New Mexico	3,769	1,740	17,560	5,795	4,390
New York	57,273	37,766	158,149	52,189	39,537
North Carolina	23,783	14,519	97,291	32,106	24,323
North Dakota	737	491	6,548	2,161	1,637
Ohio	21,502	13,168	114,988	37,946	28,747
Oklahoma	7,571	3,680	34,594	11,416	8,649
Oregon	6,919	4,263	33,811	11,157	8,453
Pennsylvania	23,691	15,715	129,366	42,691	32,341
Rhode Island	1,555	991	11,409	3,765	2,852
South Carolina	8,196	4,882	37,207	12,278	9,302
South Dakota	1,349	817	7,601	2,508	1,900
Tennessee	8,513	4,772	42,291	14,164	10,730
Texas	73,008	38,554	259,246	85,782	64,987
Utah	8,899	6,079	28,783	9,498	7,196
Vermont	2,056	1,406	6,712	2,215	1,678
Virginia	27,468	17,200	80,765	26,652	20,191
Washington	16,294	10,080	62,685	20,686	15,671
West Virginia	2,656	1,199	14,643	4,832	3,661
Wisconsin	15,677	10,718	62,486	20,620	15,621
Wyoming	809	408	4,491	1,482	1,123
TOTALS	757,932	461,537	2,986,857	985,663	746,714

Source: Author's calculations based on Appendix C in College Board, *The 5th Annual AP Report to the Nation* (New York, N.Y.: College Board, 2009).



Notes

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2. Scott J. Cech, "Number of Schools Offering AP Falls After First Audit of Courses," *Education Week*, November 14, 2007.
3. Crux Research, Inc., unpublished institutional research, March 2007.
4. Clifford Adelman, *The Tool Box Revisited: Paths to Completion from High School Through College* (Washington, D.C.: U.S. Department of Education, February 2006).
5. Kristin Klopfenstein and M. Kathleen Thomas, "The Link Between College Success and Advanced Placement Experience," unpublished paper (retrieved December 21, 2008). Available at: <http://www.utdallas.edu/research/tsp>.
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7. Wayne Camara, "College Persistence, Graduation and Remediation," *College Board Research Notes*, RN-19 (New York, N.Y.: College Board, 2003).
8. Andrew Mollison, "Surviving a Midlife Crisis: Advanced Placement Turns Fifty," *Education Next*, vol. 6, no. 1 (winter 2006).
9. Arthur G. Powell, "Student Incentives and Academic Standards: Independent Schools as a Coherent System," in *Designing Coherent Education Policy*, ed. S. H. Fuhrman (San Francisco, Calif.: Jossey-Bass, 1993).
10. Author's calculations based on information found at: <http://www.ed.gov/programs/apincent/index.html>.
11. College Entrance Examination Board, "Equity Policy Statement on the Advanced Placement Program" (New York, N.Y.: College Entrance Examination Board, 2002).
12. College Board, *The 5th Annual AP Report to the Nation* (New York, N.Y.: College Board, 2009).
13. "Minimally offered" is defined as fewer than three courses. Author's calculations based on Table 5 in Philip Handwerk et al., *Access to Success: Patterns of Advanced Placement Participation in U.S. High Schools* (Princeton, N.J.: Educational Testing Service, 2008).
14. Mollison.
15. College Board, *The 5th Annual AP Report*.
16. Based on research that shows strong correlations between PSAT/NMSQT scores and AP exam results, AP Potential is a free resource that enables schools to generate rosters of students who are likely to score a 3 or higher on a given AP exam.
17. College Board, *Opening Classroom Doors: Strategies for Expanding Access to AP* (New York, N.Y.: College Board, 2002).
18. AVID stands for Advancement Via Individual Determination. It is a research-based program that encourages minority and low-income students to attend college and provides them with the social network to do so. The proportion of Latinos taking AP exams is five times higher among AVID students than non-AVID students. For more information on the support the program provides, especially to AP students, visit <http://www.avidonline.org>.
19. SpringBoard provides rigorous English and mathematics lessons for students in grades 6 through 12. It enables students to build the skills and understanding they need for success in AP courses and college-level work.
20. For more information on how to differentiate instruction to meet the needs of AP students, see Robyn R. Jackson, *Never Work Harder than Your Students* (Alexandria, Va.: Association for Supervision and Curriculum Development, 2008).
21. A recent national survey supports this concern. More than half (56 percent) of AP teachers believe too many students overestimate their abilities and are "in over their heads." For more information, see Ann Duffett and Steve Farkas, *Growing Pains in the Advanced Placement Program: Do Tough Trade-Offs Lie Ahead?* (Washington, D.C.: Thomas B. Fordham Institute, April 2009).
22. Kentucky Legislature, 2008 reg. sess., "Senate Bill 2." Available at: <http://www.lrc.ky.gov/record/08RS/SB2.htm>.
23. Handwerk et al., 23.
24. According to data compiled by the College Board for the class of 2007, these students scored well enough on the PSAT to have at least a 60 percent chance of earning a score of 3 or higher on the AP exam.
25. For more on APEX, visit <http://www.apexlearning.com/>.
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27. Florida Statute, Sec. 1101.62, "Funds for the Operation of Schools."
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