The 6th Annual

AP® Report to the Nation

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CollegeBoard
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A Word About Comparing States and Schools

While AP® Exams are valid measures of students' content mastery of college-level studies in specific academic disciplines, they should never be used as sole measures for gauging educational excellence and equity.

Contents

Introduction

Highlights . . . 2

Definition of Success . . . 3

About the AP® Program . . . 3

Notes About Data Contained in the Report . . . 3

Themes of Equity and Excellence

Educators and policymakers nationwide are helping a wider segment of the U.S. student population experience success in AP . . . 4

Table 1: AP Equity and Excellence — Student Access and Performance in U.S. Public Schools . . . 5

Figure 1: AP Equity and Excellence — Map of the Nation . . . 6

Closing Equity and Excellence Gaps

Figure 2: Access to AP by Race/Ethnicity . . . 7

Table 2: AP Equity and Excellence Gaps — Student Access and Performance in U.S. Public Schools by Race/Ethnicity . . . 9

National Governors Association's Advanced Placement Expansion Project . . . 10

The National Math and Science Initiative's Training and Incentive Program . . . 11

Schools with the Largest Numbers of African American and Latino Students Experiencing Success in AP . . . 12

Table 3: Exemplary AP Programs (by Subject) . . . 13

Class of 2009 Data

Appendix A: Raw Numbers for Table 1 . . . 14

Appendix B: AP Program Data at a Glance . . . 15

Additional Data Available Online

The following data are available exclusively at www.collegeboard.com/apreport:

- **Graduating Class of 2009 Subject-Specific Results:** See the participation and performance results in each specific AP subject, including gender and race/ethnicity breakdowns for each subject, the number of examinees at each AP score point for specific subjects, and more.
- **State-Specific Reports:** See current and five-year trends, including AP participation and performance data for all ethnicities and low-income students for each state and the District of Columbia.
- **AP Exams Taken in U.S. Public Schools by the Graduating Class of 2009:** See raw numbers of exams taken by the 2009 graduating class, by subject, race/ethnicity and AP score point.
- **Changes in equity and excellence from 2004 to 2009:** See trends in African American, Latino and American Indian student performance and participation.

Introduction

Educators across the United States continue to enable a wider and more ethnically diverse proportion of students to achieve success in AP®. Significant inequities remain, however, which can result in traditionally underserved students not receiving the type of AP opportunities that can best prepare them for college success. *The 6th Annual AP Report to the Nation* uses a combination of state, national and AP Program data to provide each U.S. state with the context it can use to celebrate its successes, understand its unique challenges, and set meaningful and data-driven goals to prepare more students for success in college.

Highlights

Across the nation, educators and policymakers are helping a wider segment of the U.S. student population experience success in AP (see Table 1 on page 5):

- 15.9 percent of the public school graduating class of 2009 had access to an AP experience that resulted in a score of 3 or higher — the score research shows to be indicative of students learning at levels that increase the likelihood of success in college. This achievement represents a significant and consistent improvement since the class of 2004, when 12.7 percent of graduates had experienced success in AP. Eighteen states equaled or exceeded the national percentage of 15.9 percent.

Increasing numbers of African American, Latino and American Indian students are participating in AP, but these students remain underserved (see Figure 2):

- Hispanic or Latino students represent 15.9 percent of the public school graduating class of 2009, and 15.5 percent of the AP examinee population.
- Black or African American students represent 14.5 percent of the public school graduating class of 2009, and 8.2 percent of the AP examinee population.
- American Indian or Alaska Native students represent 1.2 percent of the public school graduating class of 2009, and 0.6 percent of the AP examinee population.

A number of individual public schools are recognized in the report because they have the largest number of African American and/or Latino students from the class of 2009 experiencing success in particular AP subjects. See Table 3 on page 13 for details.

This year's report shows the racial/ethnic demographics of the total graduating class compared to the racial/ethnic demographics of the AP population scoring a 3 or higher on an AP Exam (see Table 2). **An equity and excellence gap appears when traditionally underserved students comprise a smaller percentage of the successful student group than the percentage these students represent in the graduating class.**

- 18 states have closed the equity and excellence gap for American Indian or Alaska Native students.
- 16 states have closed the equity and excellence gap for Hispanic or Latino students.
- 2 states have closed the equity and excellence gap for Black or African American students.

More low-income students are participating and experiencing success in AP than ever before:

- 18.9 percent of AP examinees from the graduating class of 2009 were low-income students, up from 17.0 percent in the class of 2008 and 13.7 percent in the class of 2004.
- Low-income students made up 14.7 percent of the students experiencing success in AP from the graduating class of 2009, compared to 13.4 percent from the class of 2008 and 11.7 percent from the class of 2004.

See State Reports online for details.

Note: Because the number of low-income students in the total graduating class is not available, we are unable to report on equity and excellence gaps, as defined above, for low-income students.

Definition of Success

With over 68 percent of U.S. high school graduates entering college, the nation is steadily making entrance to college a reality for more students.[1] But high college dropout rates and the fact that about half of all first-year college students are taking at least one remedial course show us that it is not enough simply for secondary schools to help students gain admission.[2]

If the U.S. is to succeed in shrinking the gap between those who enter college and those who complete a degree, the gulf between high school graduation standards and first-year college course requirements must be eliminated. Throughout the *AP Report to the Nation*, "success" on an AP Exam is defined as an exam score of 3 or higher, which represents the score point that research finds predictive of college success and college graduation. These findings have held consistent across the decades. One example of such a study comes from the National Center for Educational Accountability, which found that an AP Exam score, and a score of 3 or higher in particular, is a strong predictor of a student's ability to persist in college and earn a bachelor's degree.[3]

While students earning 1s and 2s on AP Exams do not always demonstrate stronger college outcomes than non-AP students, Boston College researchers did find that such AP students had nonetheless developed stronger content mastery of advanced math and physics than U.S. students who had not taken AP courses. AP Calculus students — even those scoring 1s or 2s on the AP Exam — demonstrated calculus knowledge comparable to that of students from the top-performing country, France.[4] Similarly, even those students who earned AP Physics scores of 1 or 2 were bested only by students from the top three nations, Norway, Sweden and the Russian Federation.

Because more research is needed, however, to establish the conditions under which AP Exam scores lower than 3 relate to college success, the report uses an AP Exam score of 3 or higher as the definition of success.

About the AP® Program

AP is a rigorous academic program built on the commitment, passion and hard work of students and educators from secondary schools and higher education. With more than 30 courses in a wide variety of subject areas, AP provides willing and academically prepared high school students with the opportunity to study and learn at the college level.

Through AP courses, talented and dedicated AP teachers help students develop and apply the skills, abilities and content knowledge they will need later in college. Each AP course is modeled upon a comparable college course, and college and university faculty play a vital role in ensuring that AP courses align with college-level standards. For example, through the AP Course Audit, AP teachers submit their syllabi for review and approval by college faculty. Only courses using syllabi that meet or exceed the college-level curricular and resource requirements for each AP course are authorized to carry the "AP" label.

AP courses culminate in a suite of college-level assessments developed and scored by college and university faculty members as well as experienced AP teachers. AP Exams are an essential part of the AP experience, enabling students to demonstrate their mastery of college-level course work. Strong performance on AP Exams is rewarded by colleges and universities worldwide. More than 90 percent of four-year colleges and universities in the United States grant students credit, placement or both on the basis of successful AP Exam scores. But performing well on an AP Exam means more than just the successful completion of a course; it is the gateway to success in college. Research consistently shows that students who score a 3 or higher typically experience greater academic success in college and improved graduation rates than their non-AP student peers.

Notes About Data Contained in the Report

Because the chief purpose of the report is to provide state departments of education with data to gauge their successes and to identify current challenges in providing equitable educational opportunities (and because current, reliable racial/ethnic demographic data for nonpublic schools are not available for all states), the data in this report represent public schools only.

[1] "College Enrollment and Work Activity of 2008 High School Graduates" (2008), Bureau of Labor Statistics.
[2] "Preparing Students for Success in College," Policy Matters (2005), American Association of State Colleges and Universities.
[3] Chrys Dougherty, Lynn Mellor, and Shuling Jian, "The Relationship Between Advanced Placement and College Graduation" (2005), National Center for Educational Accountability.
[4] Eugenio J. Gonzalez, Kathleen M. O'Connor, and Julie A. Miles, "How Well Do Advanced Placement Students Perform on the TIMSS Advanced Mathematics and Physics Tests?" (2001), The International Study Center, Lynch School of Education, Boston College.

Themes of Equity and Excellence

Educators and policymakers nationwide are helping a wider segment of the U.S. student population experience success in AP.

The AP Program encourages educators to make equitable access a guiding principle for their AP courses by giving all willing and academically prepared students the opportunity to succeed in rigorous, college-level experiences and the advantages they bring. In the long term, an increase in the number of students participating in AP is typically accompanied by an increase in the number of successful AP students. **It is therefore only through a commitment to equitable access to AP that excellence can be achieved.**

- 15.9 percent of the public school graduating class of 2009 had access to an AP experience that resulted in a score of 3 or higher — the score predictive of college success. This represents a 3.2 percent increase over the graduating class of 2004. Eighteen states equaled or exceeded the national percentage of 15.9 percent.
- For the second year in a row, **Maryland** ranked first in the nation for having the largest percentage of a state's students receiving at least one score of 3 or higher on an AP Exam during high school.
- **Florida**, which has the fourth-highest number of students taking AP Exams in the nation, experienced the largest single-year increase in the percentage of its student population receiving at least one score of 3 or higher on an AP Exam during high school (3.1 percent).
- For the first time in the history of the report, **Virginia** saw the largest five-year increase of any state in the percentage of its student population receiving at least one score of 3 or higher on an AP Exam during high school (5.8 percent).

Credit for these successes goes to educators at all levels for preparing students for the rigors of college-level AP course work. By beginning as early as middle school to provide instruction in key knowledge and skill sets, teachers have helped ensure that students are better prepared for AP courses and more eager to maintain their academic success. By viewing all students as potential candidates for an AP course and building those students' skills over time, the number of dedicated, hardworking, college-bound students has grown.

Educators and policymakers should be especially commended for increasing access to AP among traditionally underserved students, for providing teachers with sustained and ongoing professional development, and for building Vertical Teams across the middle and high school years so that all students acquire the knowledge, abilities and skills needed to engage in a higher level of learning.

Understanding Table 1

Table 1 shows the percentage of a state's graduating class who scored a 3 or higher on at least one AP Exam. As an equation, this calculation looks like:

$$\textbf{AP Equity and Excellence Metric} = \frac{\text{\# of AP students graduating with at least one AP Exam score of 3 or higher}}{\text{\# of overall students graduating in 2009}}$$

By counting students who scored a 3 or higher on an AP Exam only once, regardless of how many AP Exams they took and were successful in, the percentage measures the proportion of the population that is receiving preparation for, and then access to, an AP experience. There is no way to inflate this percentage by restricting access to AP; students who earn 1s or 2s on AP Exams neither increase nor reduce the percentage. In addition, by showing the proportion of the overall population — not just the AP classroom — educators and policymakers are better able to determine the extent to which their overall population is succeeding in advanced academics in high school.

Table 1: AP Equity and Excellence

Student Access and Performance in U.S. Public Schools

State	Percentage of Graduating Class[5] Scoring a 3 or Higher on an AP Exam During High School: CLASS OF 2004	2008	2009	% CHANGE: 1 YEAR	5 YEARS
Alabama	5.0	6.8	7.5	0.7	2.5
Alaska	10.6	13.3	13.3	0.0	2.7
Arizona	8.8	7.9	8.2	0.3	-0.6
Arkansas	6.1	10.6	11.0	0.4	4.9
California	17.9	20.2	20.8	0.6	2.9
Colorado	15.1	19.0	20.1	1.1	5.0
Connecticut	17.0	21.0	21.3	0.3	4.3
Delaware	10.6	13.8	14.3	0.5	3.7
District of Columbia	6.9	6.9	5.8	-1.1	-1.1
Florida	16.3	18.2	21.3	3.1	5.0
Georgia	12.4	16.3	17.8	1.5	5.4
Hawaii	7.4	8.0	8.5	0.5	1.1
Idaho	8.1	9.5	10.2	0.7	2.1
Illinois	12.6	15.2	15.9	0.7	3.3
Indiana	8.0	10.0	10.4	0.4	2.4
Iowa	6.3	8.3	8.3	0.0	2.0
Kansas	6.2	8.6	9.3	0.7	3.1
Kentucky	7.7	10.0	10.9	0.9	3.2
Louisiana	2.3	3.7	4.1	0.4	1.8
Maine	12.8	17.4	18.2	0.8	5.4
Maryland	19.4	23.6	24.8	1.2	5.4
Massachusetts	17.2	20.8	22.1	1.3	4.9
Michigan	10.8	13.0	13.6	0.6	2.8
Minnesota	10.6	14.2	15.5	1.3	4.9
Mississippi	2.8	3.9	4.0	0.1	1.2
Missouri	5.0	6.5	7.1	0.6	2.1
Montana	8.9	10.6	10.6	0.0	1.7
Nebraska	3.9	6.5	7.0	0.5	3.1
Nevada	12.3	13.5	14.6	1.1	2.3
New Hampshire	11.5	15.6	15.9	0.3	4.4
New Jersey	15.1	17.3	18.0	0.7	2.9
New Mexico	8.4	9.9	9.3	-0.6	0.9
New York	20.5	23.3	23.8	0.5	3.3
North Carolina	15.0	17.3	17.4	0.1	2.4
North Dakota	5.7	6.9	6.4	-0.5	0.7
Ohio	8.8	10.8	11.0	0.2	2.2
Oklahoma	8.2	9.7	9.5	-0.2	1.3
Oregon	8.3	13.1	13.2	0.1	4.9
Pennsylvania	10.0	11.9	12.3	0.4	2.3
Rhode Island	7.8	9.5	10.7	1.2	2.9
South Carolina	11.7	13.8	14.8	1.0	3.1
South Dakota	8.2	9.7	10.3	0.6	2.1
Tennessee	7.4	9.2	9.3	0.1	1.9
Texas	12.5	14.5	14.9	0.4	2.4
Utah	18.6	18.9	18.5	-0.4	-0.1
Vermont	14.3	19.8	19.3	-0.5	5.0
Virginia	17.1	21.3	22.9	1.6	5.8
Washington	11.1	15.5	16.0	0.5	4.9
West Virginia	6.2	6.9	7.6	0.7	1.4
Wisconsin	13.2	16.6	17.3	0.7	4.1
Wyoming	6.5	7.5	7.7	0.2	1.2
Total	**12.7**	**15.2**	**15.9**	**0.7**	**3.2**

[5] "Knocking at the College Door" (2008), Western Interstate Commission for Higher Education.

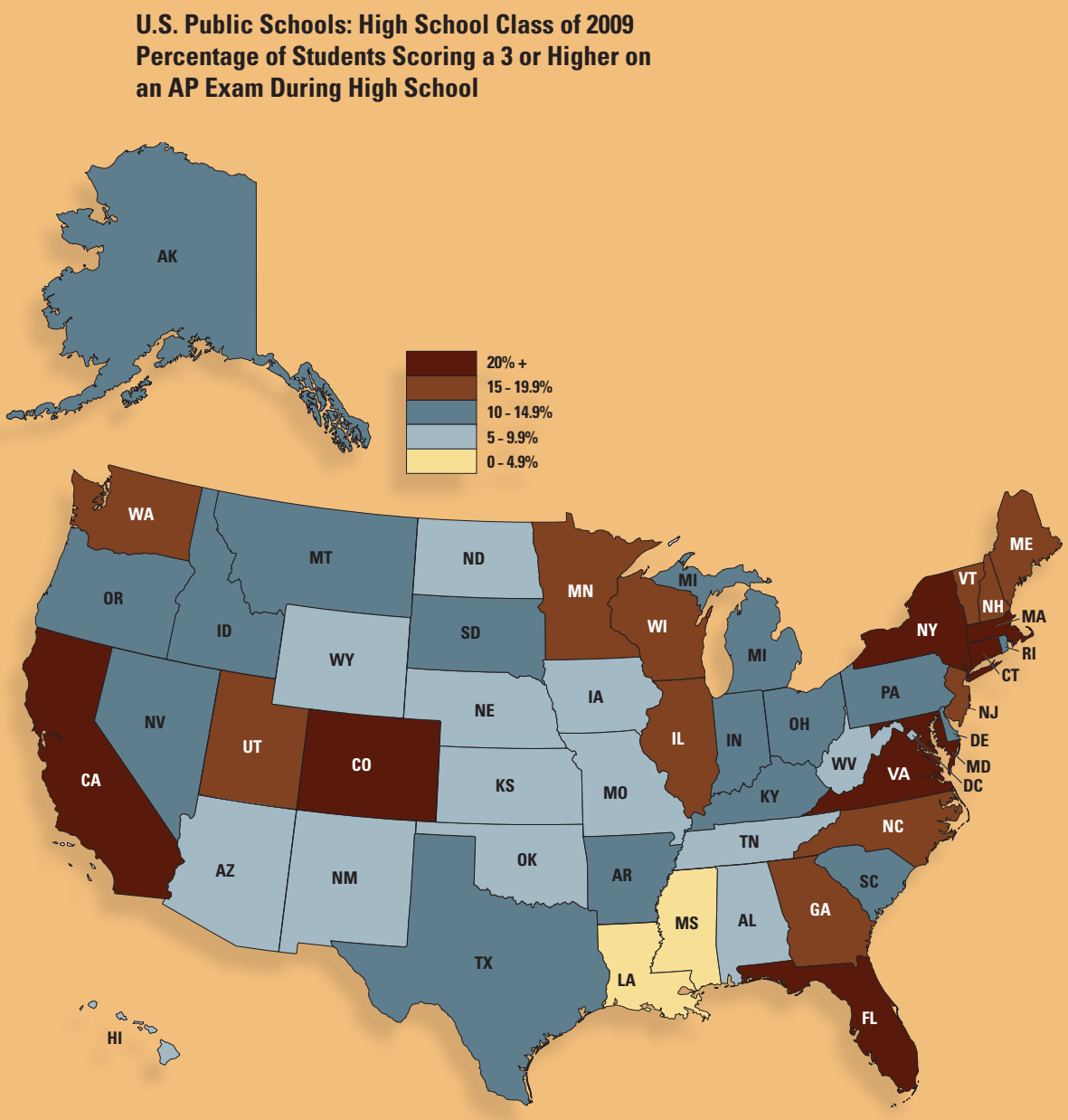
Figure 1: AP Equity and Excellence — Map of the Nation

States with the Greatest % of Seniors Scoring a 3 or Higher on an AP Exam

State	%
Maryland	24.8
New York	23.8
Virginia	22.9
Massachusetts	22.1
Florida	21.3
Connecticut	21.3
California	20.8
Colorado	20.1
Vermont	19.3
Utah	18.5
Maine	18.2
New Jersey	18.0
Georgia	17.8
North Carolina	17.4
Wisconsin	17.3
Washington	16.0
New Hampshire	15.9
Illinois	15.9
Minnesota	15.5
Texas	14.9

States with the Greatest Expansion of AP Scores of 3 or Higher Since 2004

State	% Change
Virginia	5.8
Maryland	5.4
Georgia	5.4
Maine	5.4
Colorado	5.0
Vermont	5.0
Florida	5.0



Closing AP Equity and Excellence Gaps

True equity is not achieved until the demographics of AP participation and performance reflect the demographics of the nation.

The AP Program shares educators' mission to connect traditionally underserved minority students to AP courses, and encourages schools to make every effort to ensure that their AP classes reflect the racial and ethnic diversity of their student body.

Increased percentages of African American and Latino students are participating in AP. (See Figure 2)

- Hispanic or Latino students represent 15.9 percent of the public school graduating class of 2009, and 15.5 percent of the AP examinee population (compared to 15.4 percent and 14.8 percent, respectively, in 2008).
- Black or African American students represent 14.5 percent of the public school graduating class of 2009, and 8.2 percent of the AP examinee population (compared to 14.4 percent and 7.8 percent, respectively, in 2008).

Figure 2: Access to AP by Race/Ethnicity

U.S. Public Schools: High School Class of 2009

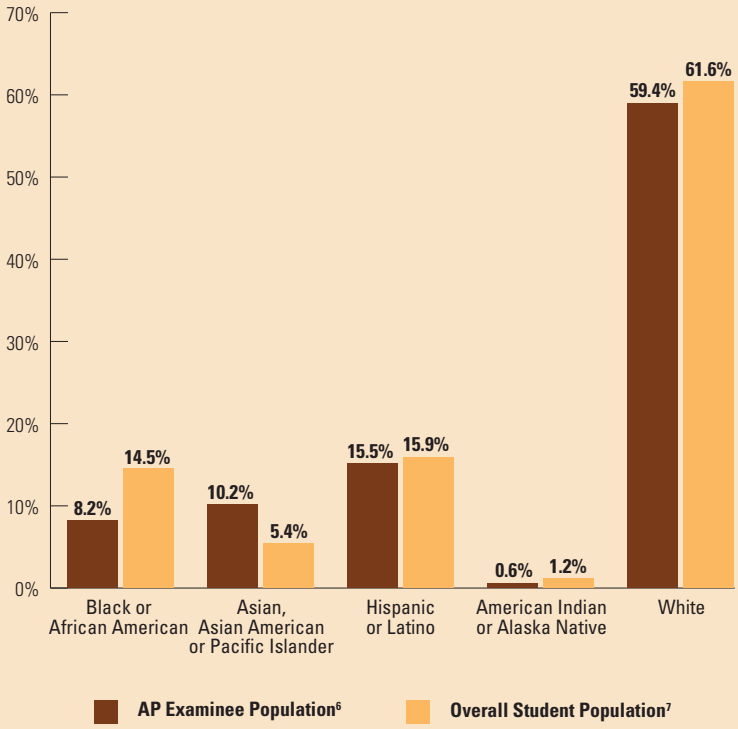


Table 2 (see page 9) shows the racial/ethnic demographics of the total high school class compared to the racial/ethnic demographics of the successful AP examinee population.

- 18 states have closed the equity and excellence gap for American Indian or Alaska Native students.
- 16 states have closed the equity and excellence gap for Hispanic or Latino students.
- 2 states have closed the equity and excellence gap for black or African American students.

Although 16 states have closed the equity and excellence gap for Hispanic or Latino students, when you exclude from the successful AP examinee population Latino students whose only AP Exam score of 3 or higher was on the Spanish Language Exam, the number of states who have eliminated the gap shrinks to six. AP Spanish Language often serves as a gateway course for Latino students, providing students with a rigorous and confidence-inspiring experience that leads them to take AP courses in other subjects. Even so, much work remains to increase access to and foster Latino student success in AP courses beyond Spanish Language, as looking at these gaps illustrates. See Additional Data online for details.

Despite strides that have been made by educators to provide traditionally underserved students with access to AP courses, the data in this report indicate that these students are not always receiving adequate preparation for the rigors of college-level course work. While some recent research[8] shows how exposing students to the college-level standards inherent in AP courses can lead to college success (even for those students who score 1s or 2s on an AP Exam), the likelihood of college success is stronger for those students who score a 3 or higher. It is important for states and educators to help students learn at the level that will produce a score of 3 or higher, which is the level of performance research consistently finds to be predictive of college success, and which enables many students to earn credit, placement or both. Major initiatives are needed to ensure adequate preparation of students in middle school and ninth and 10th grades so that all students will have an equitable chance at success when they go on to take AP courses and exams later in high school.

[6] These examinees include all public school students in the class of 2009 who took an AP Exam at any point in high school. Because some AP Exam takers identify themselves as "Other" for ethnicity or do not provide ethnicity, the "AP Examinee Population" in this figure only represents 94.0 percent of the AP population.
[7] "Knocking at the College Door" (2008), Western Interstate Commission for Higher Education.
[8] Linda Hargrove, Donn Godin, and Barbara Dodd, "College Outcomes Comparisons by AP and Non-AP High School Experiences" (2008), The College Board, New York, p. 34.

Understanding Table 2

It is helpful to understand the metric used to determine the percentages in Table 2 because the data can guide educators in their continued efforts to ensure that traditionally underserved students receive preparation for, and access to, AP courses.

The data in the first column, which shows the **percentage of the graduating class who are from a particular race/ethnicity**, were calculated by dividing the number of 2009 public school graduates of a particular race/ethnicity by the overall number of 2009 public school graduates. As an equation this calculation looks like:

$$\text{"\% of graduating class who are…"} = \frac{\text{\# of students in graduating class of a particular race/ethnicity}}{\text{\# of overall students in graduating class}}$$

The data in the second column, which shows the **percentage of successful AP examinees who are from a particular race/ethnicity**, were calculated by dividing the number of 2009 public school graduates of a particular race/ethnicity who earned an AP Exam score of 3 or higher at any point in high school by the number of total AP students scoring a 3 or higher at least once. If a student earned more than one AP Exam score of 3 or higher, she or he was still counted only once. As an equation this calculation looks like:

$$\text{"\% of successful AP examinee population who are…"} = \frac{\text{\# of students in graduating class of a particular race/ethnicity scoring a 3 or higher at least once}}{\text{\# of overall AP students scoring a 3 or higher at least once}}$$

An equity and excellence gap appears when traditionally underserved students comprise a smaller percentage of the successful student group than the percentage these students represent in the graduating class. For example, if 20 percent of students in a state's graduating class are African American, true equity and excellence would not be achieved until 20 percent of the students taking AP Exams and scoring a 3 or higher on them are African American.

Table 2: AP Equity and Excellence Gaps

Student Access and Performance in U.S. Public Schools by Race/Ethnicity

State	% of Graduating Class[9] ...who are black/African American	% of Successful AP Exam. Population ...who are black/African American	Equity and Excellence Gap Eliminated	% of Graduating Class[9] ...who are Hispanic/Latino	% of Successful AP Exam. Population ...who are Hispanic/Latino	Equity and Excellence Gap Eliminated	% of Graduating Class[9] ...who are American Indian/ Alaska Native	% of Successful AP Exam. Population ...who are American Indian/ Alaska Native	Equity and Excellence Gap Eliminated
Alabama	32.3	7.6		1.9	2.5	✓	1.0	0.3	
Alaska	4.1	2.1		2.8	4.1	✓	20.5	4.1	
Arizona	5.6	1.9		32.3	21.3		6.9	0.9	
Arkansas	21.3	3.7		6.0	6.2	✓	0.9	1.0	✓
California	7.3	2.0		40.1	31.7		0.8	0.3	
Colorado	5.5	2.0		19.7	9.0		1.0	0.5	
Connecticut	12.2	2.2		11.6	6.1		0.3	0.3	✓
Delaware	29.5	7.8		6.7	4.6		0.4	0.5	✓
District of Columbia	89.9	26.2		6.5	19.7	✓	*	0.0	*
Florida	19.7	6.3		22.2	27.6	✓	0.4	0.3	
Georgia	34.4	11.4		5.5	6.1	✓	0.1	0.4	✓
Hawaii	1.7	1.8	✓	4.1	3.0		0.4	0.4	✓
Idaho	0.8	0.3		10.0	3.6		1.7	0.8	
Illinois	15.8	3.8		14.0	11.7		0.3	0.2	
Indiana	9.2	2.3		4.4	2.7		0.2	0.2	✓
Iowa	4.1	1.4		4.0	2.5		0.6	0.2	
Kansas	7.4	2.9		7.6	5.0		1.4	0.9	
Kentucky	10.1	2.7		2.3	2.3	✓	0.1	0.2	✓
Louisiana	35.8	8.4		1.9	4.4	✓	0.8	0.5	
Maine	2.0	0.5		1.2	1.1		0.6	0.4	
Maryland	34.9	9.6		6.8	7.5	✓	0.3	0.2	
Massachusetts	7.3	1.8		10.0	4.6		0.2	0.2	✓
Michigan	15.7	2.5		3.0	2.4		0.7	0.3	
Minnesota	6.0	1.5		3.4	1.7		1.6	0.5	
Mississippi	49.1	11.0		1.1	2.1	✓	0.1	0.3	✓
Missouri	16.2	3.2		2.8	2.7		0.5	0.4	
Montana	0.6	0.8	✓	2.1	1.8		8.0	0.7	
Nebraska	5.7	2.1		8.4	3.5		1.1	0.6	
Nevada	10.4	3.3		26.2	17.3		1.3	0.6	
New Hampshire	1.4	0.5		2.8	1.8		0.2	0.2	✓
New Jersey	15.8	2.8		16.1	9.3		0.3	0.2	
New Mexico	2.6	1.6		48.0	36.7		11.5	1.9	
New York	15.0	4.1		13.8	11.0		0.4	0.2	
North Carolina	29.5	6.1		6.1	4.5		1.1	0.4	
North Dakota	1.6	0.7		1.1	0.4		6.3	0.9	
Ohio	13.5	3.0		1.8	1.8	✓	0.1	0.2	✓
Oklahoma	9.9	3.3		6.9	6.9	✓	19.6	8.4	
Oregon	2.2	1.0		12.0	5.9		2.2	0.7	
Pennsylvania	13.1	1.8		5.0	2.7		0.1	0.2	✓
Rhode Island	8.3	1.3		14.6	5.0		0.6	0.4	
South Carolina	38.2	8.3		3.2	3.2	✓	0.3	0.5	✓
South Dakota	1.5	0.7		1.8	1.4		5.3	0.6	
Tennessee	21.7	7.4		2.9	3.8	✓	0.1	0.4	✓
Texas	15.0	3.7		38.5	32.3		0.4	0.5	✓
Utah	1.1	0.3		8.6	5.4		1.5	0.4	
Vermont	1.4	0.5		1.5	0.9		0.5	0.5	✓
Virginia	24.4	6.5		6.3	6.5	✓	0.3	0.5	✓
Washington	4.8	1.6		10.0	6.2		2.1	0.7	
West Virginia	4.2	0.5		1.0	1.1	✓	0.1	0.4	✓
Wisconsin	6.4	1.2		4.6	2.9		1.2	0.4	
Wyoming	1.1	0.2		7.1	4.5		2.3	0.0	
Nation	**14.5**	**3.7**		**15.9**	**14.3**		**1.2**	**0.4**	

[9] "Knocking at the College Door" (2008), Western Interstate Commission for Higher Education.

* Precise American Indian or Alaska Native student enrollments for the District of Columbia are not available from the Western Interstate Commission for Higher Education.

Initiatives Fostering AP Success for Traditionally Underserved Students

While much work remains to increase minority and low-income participation and success in AP classrooms, two major initiatives have reported results in helping schools make progress toward closing achievement gaps. The success of both initiatives has shown that enacting powerful policies at the state level is a vital step in building schools' capacities to offer AP to a steadily diversifying student population.

National Governors Association's Advanced Placement Expansion Project

Six states made great strides in closing achievement gaps for minority and low-income students.

In 2005, the **National Governors Association for Best Practices** (NGA Center), in collaboration with the College Board, launched the Expansion project as part of its initiative to redesign American high schools. Fifty-one pilot schools in **Alabama**, **Georgia**, **Kentucky**, **Maine**, **Nevada** and **Wisconsin** received funding to expand AP courses to allow more minority and low-income students to participate.

Working in one urban and one rural school district in each of the six states, the Expansion project focuses on: expanding access to AP courses, building teacher and student capacity, and creating incentives for schools and students. The states implemented these strategies in a variety of creative ways.

For example:

- To **expand access**, several high schools in **Georgia** asked AP students who were also athletes or cheerleaders to recruit new AP students. **Alabama**, **Kentucky** and **Nevada** used virtual learning technology to greatly expand AP in rural areas.
- In order to **build capacity**, both **Nevada** and **Wisconsin** institutionalized a weeklong, statewide summer institute for teachers. **Maine** set up a mentoring initiative for new AP teachers as part of a larger effort to build a college-going culture.
- Schools in many project states offered **incentives** to students by guaranteeing them an extra grade point for their effort. **Kentucky** did the most to create incentives for schools to offer and students to take AP courses. In April 2008, Gov. Steve Beshear signed legislation that creates financial incentives for public schools to make AP science and math courses available, and provides supplemental college scholarship awards for low-income students based on their AP Exam performance.[10]

The Results Are In

In two years, the number of students taking AP courses in these 51 schools rose 65 percent, and the number of minority and low-income students taking AP Exams more than doubled.

Other project highlights include:

- The percentage of the student population taking an AP course and scoring a 3 or higher increased from 6.6 percent in 2005-06 to 8.3 percent in 2007-08.
- Approximately 3,500 more students were taking AP courses in 2007-08 than at the start of the project in 2005-06; minority students comprised approximately 2,500 of the 3,500 students.

To see the full report and find out more information about NGA and the Center for Best Practices, please visit www.nga.org.

Increase in AP Enrollment by Project State

Project State	# of Students in AP Courses 2005–2006 (Baseline)	# of Students in AP Courses 2006–2007	# of Students in AP Courses 2007–2008	Two-Year % Change at Pilot Schools	% of Minority Enrollment in the State	% of Minority Enrollment in Pilot Schools	# of Minority Students in AP Courses 2005–2006 (Baseline)	# of Minority Students in AP Courses 2006–2007	# of Minority Students in AP Courses 2007–2008	% Change at Pilot Schools
Alabama	202	357	293	45%	36%	65%	64	152	136	113%
Georgia	1,237	2,018	2,173	76%	36%	37%	364	601	642	76%
Kentucky	1,343	1,927	2,213	65%	11%	19%	93	151	322	246%
Maine	371	631	742	100%	3%	16%	12	33	52	333%
Nevada	710	1,169	1,661	134%	29%	81%	472	610	1,023	117%
Wisconsin	1,333	1,532	1,476	11%	10%	29%	203	255	310	53%
Project Totals	**5,196**	**7,634**	**8,558**	**65%**	**25%**	**41%**	**1,208**	**1,802**	**2,485**	**106%**

Source: http://www.nga.org/Files/pdf/0908APREPORT.PDF "Raising Rigor; Getting Results: Lessons Learned from AP Expansion" (2009), NGA Center for Best Practices.

[10] Kentucky Legislature, 2008 reg. sess., "Senate Bill 2." Available at http://www.lrc.ky.gov/record/08RS/SB2.htm

The National Math and Science Initiative's Training and Incentive Program

Schools in this National Math and Science Initiative program produced a 52 percent increase in exam scores of 3 or higher in math, science and English in the program's first year.

The **National Math and Science Initiative** (NMSI) is replicating a comprehensive training and incentive program that originated in Dallas, Texas, in 2000. The NMSI began implementing the program on a national level in the 2008-09 school year due to its results in increasing the number of students taking and scoring a 3 or higher on AP math, science and English exams, and in expanding access to traditionally underserved students. NMSI's state affiliates partnered with 67 public schools in **Alabama**, **Arkansas**, **Connecticut**, **Kentucky**, **Massachusetts** and **Virginia** to increase teacher effectiveness and student achievement, and the program will expand to include a new cohort of public high schools each year over the next five years.

An important element of NMSI's holistic, multifaceted program is the promotion of strong partnerships with leaders in business, government, education and community to ensure the long-term sustainability of the more rigorous course work required to improve college readiness. The NMSI selected nonprofit partners in the six states for five-year funding and NMSI program management support. The strategies include:

- More **student time-on-task**, reinforced by special prep sessions.
- **Student recruitment/counseling** so more students will have the confidence and support to take advanced courses.
- **Minischolarship incentives** for successful students.
- **Supplies and equipment** provided for the state-of-the-art lab projects essential for exploratory learning.
- **Stipends and bonuses for teachers and administrators** who put in extra time and effort for AP instruction.
- Rigorous, content-focused **teacher training** for the AP and Pre-AP years.
- **Lead teachers** who serve as mentors.
- **Vertical teaming** so students can acquire the skills they need to participate in challenging AP courses.

The Results Are In

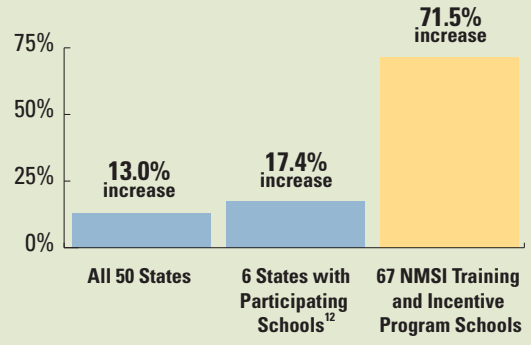
In the schools participating in the program, there was a 71.5 percent increase in the number of successful AP Exams in math, science and English for African American and Latino Students.

Other significant results from May 2009 show:

- In the 67 schools participating in the program, there was a 52.0 percent increase in AP Exam scores of 3 or higher in math, science and English from May 2008 to May 2009.
- Over 12,500 AP Exams were taken by AP students in math, science and English, which is an 80.4 percent increase over the previous school year.
- There was a 134.3 percent increase over the previous school year in AP math, science and English exams taken by African American and Hispanic students.

To see all of the first-year results for the NMSI's training and incentive program, please visit www.nationalmathandscience.org.

Percent Increase from May 2008 to May 2009 in successful AP Exams in math, science and English for African American and Latino Students[11]



[11] This graph shows the percentage increase in successful exams in AP Biology, Calculus (both), Chemistry, Computer Science (both), English (both), Environmental Science and Physics (all) for black or African American and Hispanic or Latino students in public schools from the May 2008 to the May 2009 exam administration. **Source:** Adapted from http://nationalmathandscience.org/images/pdf/nmsi_aptip_results.pdf

[12] NMSI is funding replication of the training and incentive program in six states: Ala., Ark., Conn., Ky., Mass. and Va.

Schools with the Largest Numbers of African American and Latino Students Experiencing Success in AP

The College Board applauds schools across the nation for increasing access to AP among traditionally underserved students. There are many schools that have achieved success in one particular regard — assisting a significant number of African American and/or Latino students to succeed in particular AP subjects. The following schools **lead** the nation in this achievement. For details, see Table 3.

California

Calexico High School (Calexico, Calif.)

Florida

Barbara Goleman Senior High School (Miami, Fla.)

Coral Reef Senior High School (Miami, Fla.)

Cypress Bay High School (Weston, Fla.)

Design and Architecture Senior High (Miami, Fla.)

Miami Coral Park Senior High School (Miami, Fla.)

Miami Killian Senior High School (Miami, Fla.)

Stanton College Preparatory School (Jacksonville, Fla.)

Georgia

Southwest DeKalb High School (Decatur, Ga.)

Illinois

Homewood-Flossmoor Community High School (Flossmoor, Ill.)

Maryland

Eleanor Roosevelt High School (Greenbelt, Md.)

Michigan

Renaissance High School (Detroit, Mich.)

Texas

Michael E. DeBakey High School for Health Professions (Houston, Texas)

School of Science and Engineering at Yvonne A. Ewell Townview Magnet Center (Dallas, Texas)

Valley View High School (Pharr, Texas)

Table 3: Exemplary AP Programs (by Subject)

	Public school with the largest number of African American students from the class of 2009 scoring a 3 or higher	Public school with the largest number of Latino students from the class of 2009 scoring a 3 or higher
AP Art History		Barbara Goleman Senior High School (Miami, Fla.)
AP Biology	Eleanor Roosevelt High School (Greenbelt, Md.)	
AP Calculus AB	Michael E. DeBakey High School for Health Professions (Houston, Texas)	School of Science and Engineering at Yvonne A. Ewell Townview Magnet Center (Dallas, Texas)
AP Calculus BC		Cypress Bay High School (Weston, Fla.)
AP Chemistry	Eleanor Roosevelt High School (Greenbelt, Md.)	Miami Coral Park Senior High School (Miami, Fla.)
AP English Language	Eleanor Roosevelt High School (Greenbelt, Md.)	Coral Reef Senior High School (Miami, Fla.)
AP English Literature	Renaissance High School (Detroit, Mich.)	Coral Reef Senior High School (Miami, Fla.)
AP Environmental Science		Miami Killian Senior High School (Miami, Fla.)
AP European History	Stanton College Preparatory School (Jacksonville, Fla.)	Coral Reef Senior High School (Miami, Fla.)
AP Government and Politics: United States		Cypress Bay High School (Weston, Fla.)
AP Human Geography		Miami Killian Senior High School (Miami, Fla.)
AP Macroeconomics		Cypress Bay High School (Weston, Fla.)
AP Microeconomics		Cypress Bay High School (Weston, Fla.)
AP Psychology	Homewood-Flossmoor Community High School (Flossmoor, Ill.)	Cypress Bay High School (Weston, Fla.)
AP Spanish Language		Calexico High School (Calexico, Calif.)
AP Spanish Literature		Valley View High School (Pharr, Texas)
AP Statistics		Cypress Bay High School (Weston, Fla.)
AP Studio Art		Design and Architecture Senior High (Miami, Fla.)
AP United States History	Southwest DeKalb High School (Decatur, Ga.)	Cypress Bay High School (Weston, Fla.)
AP World History		Coral Reef Senior High School (Miami, Fla.)

Appendix A: Raw Numbers for Table 1

	Number of Students			Number of Students Who Took an AP Exam in High School			Percentage of Students Who Took an AP Exam in High School			Number of Students Who Scored 3+ on an AP Exam in High School			Percentage of Students Who Scored 3+ on an AP Exam in High School		
State	**2004**	**2008**	**2009**	**2004**	**2008**	**2009**	**2004**	**2008**	**2009**	**2004**	**2008**	**2009**	**2004**	**2008**	**2009**
Alabama	36,464	39,317	39,692	3,217	5,327	6,466	8.8	13.5	16.3	1,833	2,691	2,972	5.0	6.8	7.5
Alaska	7,236	7,999	7,404	1,183	1,621	1,556	16.3	20.3	21.0	765	1,063	982	10.6	13.3	13.3
Arizona	45,508	75,518	78,608	6,352	10,572	11,356	14.0	14.0	14.4	3,998	5,985	6,475	8.8	7.9	8.2
Arkansas	27,181	29,177	29,395	3,494	9,721	9,997	12.9	33.3	34.0	1,651	3,102	3,226	6.1	10.6	11.0
California	343,480	388,697	387,759	90,550	119,494	124,154	26.4	30.7	32.0	61,325	78,387	80,729	17.9	20.2	20.8
Colorado	44,777	48,387	47,106	10,454	14,778	15,499	23.3	30.5	32.9	6,746	9,186	9,476	15.1	19.0	20.1
Connecticut	34,573	37,735	37,578	8,147	10,933	11,202	23.6	29.0	29.8	5,876	7,908	8,019	17.0	21.0	21.3
Delaware	6,951	7,251	7,595	1,315	1,943	2,050	18.9	26.8	27.0	736	1,000	1,083	10.6	13.8	14.3
District of Columbia	3,031	3,967	4,035	537	1,076	1,080	17.7	27.1	26.8	210	274	233	6.9	6.9	5.8
Florida	131,418	158,553	145,317	36,531	53,952	58,394	27.8	34.0	40.2	21,382	28,783	30,905	16.3	18.2	21.3
Georgia	68,550	80,926	81,613	14,979	24,494	27,442	21.9	30.3	33.6	8,466	13,153	14,525	12.4	16.3	17.8
Hawaii	10,324	11,115	11,287	1,474	1,849	2,130	14.3	16.6	18.9	767	892	964	7.4	8.0	8.5
Idaho	15,547	16,760	17,012	1,913	2,432	2,623	12.3	14.5	15.4	1,257	1,596	1,732	8.1	9.5	10.2
Illinois	124,763	133,806	134,495	21,737	30,574	32,952	17.4	22.8	24.5	15,720	20,297	21,429	12.6	15.2	15.9
Indiana	56,008	62,949	63,165	9,001	12,479	13,098	16.1	19.8	20.7	4,498	6,300	6,591	8.0	10.0	10.4
Iowa	34,339	35,715	35,466	3,286	4,483	4,691	9.6	12.6	13.2	2,178	2,951	2,929	6.3	8.3	8.3
Kansas	30,155	30,034	29,398	2,752	4,116	4,690	9.1	13.7	16.0	1,883	2,591	2,742	6.2	8.6	9.3
Kentucky	37,787	39,970	40,305	5,700	7,925	8,849	15.1	19.8	22.0	2,904	3,984	4,376	7.7	10.0	10.9
Louisiana	37,019	30,154	30,113	1,635	2,536	2,861	4.4	8.4	9.5	856	1,116	1,245	2.3	3.7	4.1
Maine	13,278	13,243	12,679	2,626	3,822	3,951	19.8	28.9	31.2	1,693	2,300	2,307	12.8	17.4	18.2
Maryland	52,870	58,484	58,284	15,372	22,006	23,293	29.1	37.6	40.0	10,248	13,785	14,455	19.4	23.6	24.8
Massachusetts	58,326	62,966	61,665	13,926	18,370	19,086	23.9	29.2	31.0	10,004	13,128	13,634	17.2	20.8	22.1
Michigan	98,823	111,072	109,349	16,272	22,496	23,349	16.5	20.3	21.4	10,637	14,461	14,874	10.8	13.0	13.6
Minnesota	59,096	60,321	58,915	9,579	13,570	14,396	16.2	22.5	24.4	6,257	8,558	9,111	10.6	14.2	15.5
Mississippi	23,735	24,985	25,377	1,622	3,157	3,282	6.8	12.6	12.9	673	976	1,019	2.8	3.9	4.0
Missouri	57,983	60,620	62,077	4,412	6,560	7,649	7.6	10.8	12.3	2,905	3,927	4,388	5.0	6.5	7.1
Montana	10,500	10,280	10,036	1,380	1,630	1,661	13.1	15.9	16.6	932	1,086	1,066	8.9	10.6	10.6
Nebraska	20,309	20,801	20,623	1,230	2,233	2,571	6.1	10.7	12.5	788	1,348	1,443	3.9	6.5	7.0
Nevada	15,201	20,106	20,714	2,978	4,950	5,582	19.6	24.6	26.9	1,873	2,716	3,023	12.3	13.5	14.6
New Hampshire	13,309	14,454	14,184	2,210	3,068	3,082	16.6	21.2	21.7	1,533	2,259	2,260	11.5	15.6	15.9
New Jersey	83,826	98,465	97,706	17,332	23,871	24,541	20.7	24.2	25.1	12,675	17,035	17,565	15.1	17.3	18.0
New Mexico	17,892	17,518	17,849	3,080	3,769	3,771	17.2	21.5	21.1	1,501	1,740	1,661	8.4	9.9	9.3
New York	148,510	161,943	159,434	45,763	57,351	58,712	30.8	35.4	36.8	30,504	37,792	38,016	20.5	23.3	23.8
North Carolina	72,126	83,780	84,507	18,090	23,788	24,563	25.1	28.4	29.1	10,823	14,519	14,697	15.0	17.3	17.4
North Dakota	7,888	7,098	7,035	666	737	735	8.4	10.4	10.4	449	491	448	5.7	6.9	6.4
Ohio	119,029	122,456	124,275	16,680	21,502	22,242	14.0	17.6	17.9	10,441	13,168	13,708	8.8	10.8	11.0
Oklahoma	36,799	37,411	37,253	6,121	7,519	7,313	16.6	20.1	19.6	3,028	3,632	3,526	8.2	9.7	9.5
Oregon	32,958	32,631	32,624	4,206	6,914	6,918	12.8	21.2	21.2	2,735	4,261	4,305	8.3	13.1	13.2
Pennsylvania	123,474	132,303	131,150	18,168	23,788	24,606	14.7	18.0	18.8	12,334	15,792	16,154	10.0	11.9	12.3
Rhode Island	9,258	10,427	10,206	1,112	1,555	1,766	12.0	14.9	17.3	726	991	1,092	7.8	9.5	10.7
South Carolina	33,235	35,492	35,272	6,644	8,195	9,178	20.0	23.1	26.0	3,901	4,882	5,233	11.7	13.8	14.8
South Dakota	9,001	8,433	8,319	1,194	1,349	1,326	13.3	16.0	15.9	737	817	859	8.2	9.7	10.3
Tennessee	46,096	51,704	51,885	5,827	8,512	9,140	12.6	16.5	17.6	3,402	4,772	4,835	7.4	9.2	9.3
Texas	244,165	265,566	267,511	53,339	73,088	76,875	21.8	27.5	28.7	30,633	38,584	39,811	12.5	14.5	14.9
Utah	30,252	32,199	33,137	7,984	8,914	9,191	26.4	27.7	27.7	5,632	6,085	6,140	18.6	18.9	18.5
Vermont	7,100	7,084	6,942	1,492	2,056	1,945	21.0	29.0	28.0	1,012	1,406	1,342	14.3	19.8	19.3
Virginia	72,042	80,630	81,073	19,466	27,468	29,539	27.0	34.1	36.4	12,349	17,200	18,568	17.1	21.3	22.9
Washington	61,274	65,128	64,785	10,775	16,294	17,274	17.6	25.0	26.7	6,830	10,080	10,343	11.1	15.5	16.0
West Virginia	17,339	17,363	17,917	2,170	2,656	3,090	12.5	15.3	17.2	1,079	1,199	1,360	6.2	6.9	7.6
Wisconsin	63,250	64,739	63,689	12,122	15,677	16,109	19.2	24.2	25.3	8,355	10,718	11,047	13.2	16.6	17.3
Wyoming	5,833	5,408	5,546	638	809	803	10.9	15.0	14.5	381	408	426	6.5	7.5	7.7
Nation	**2,759,888**	**3,033,140**	**3,019,361**	**548,733**	**757,979**	**798,629**	**19.9**	**25.0**	**26.5**	**350,121**	**461,375**	**479,349**	**12.7**	**15.2**	**15.9**

Class of 2009 Data

Appendix B: AP Program Data at a Glance

AP Student Participation and Performance

Class of 2009 (U.S. Public Schools Only)

	Total number of high school graduates:	Total number of high school graduates who took an AP Exam at some point in high school:	Total number of high school graduates who scored a 3 or higher on an AP Exam at some point in high school:
2004	2,759,888	548,733 (19.9%)	350,121 (12.7%)
2009	3,019,361	798,629 (26.5%)	479,349 (15.9%)

Total number of U.S. public schools attended by AP students from the class of 2009: 12,540 (an increase of 217 over last year)

AP Exams taken by the largest number of students from the class of 2009 during high school:

1. AP United States History
2. AP English Literature and Composition
3. AP English Language and Composition
4. AP Calculus AB
5. AP Government and Politics: United States
6. AP Biology
7. AP Psychology
8. AP Statistics
9. AP World History
10. AP Spanish Language

AP French Literature was taken by the smallest number of students from the class of 2009.

Additional AP Program Data

Public and Nonpublic Schools

- Average number of AP courses participating schools offer: 10
- Average number of AP Exam takers per school: 97
- Seniors representing 3,377 nonpublic schools (an increase of 78 schools from last year) and 1,056 schools outside of the United States (an increase of 47 schools from last year) participated in AP at some point during their high school career.

Additional data from each year's AP Exam administration, across public and nonpublic schools, are available online at: www.collegeboard.com/ap/summaryreports.

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