

**29.6%**

**Participation Rate**

among BCPS 11<sup>th</sup> and 12<sup>th</sup> graders

**52.6%**

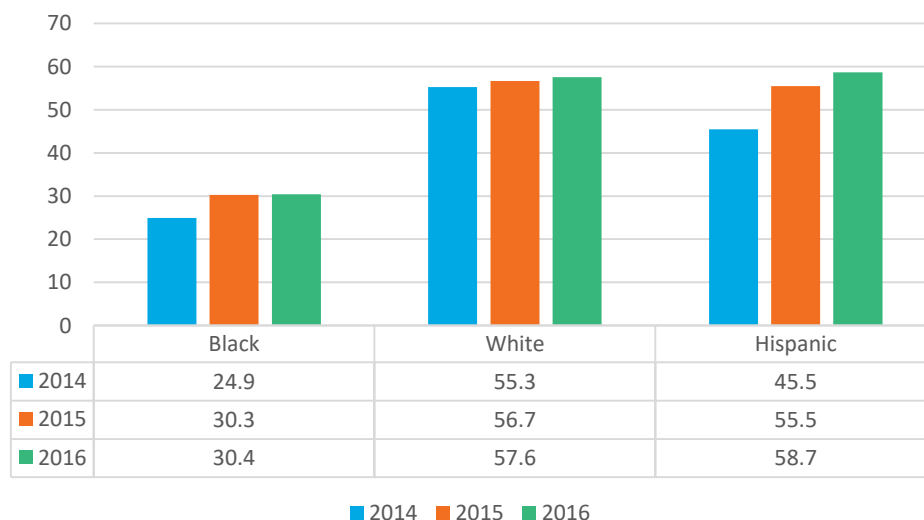
**Exam Passing Rate**

students earning scores of 3 or higher

**AP at a Glance**

- In 2015-16, 18,543 BCPS high school students took 34,047 AP tests, an average of 1.8 exams per participant.
- Over the past three years, student **participation** in AP has **decreased** by 1.7 percentage points.
- The AP exam **passing rate** has **increased** over the past three years from 48.7% to 52.6%. This past administration marks two consecutive years of the passing rate exceeding 50%.
- The **passing rate gap** between White and Black students **narrowed** by 3.2 percentage points. The passing rates increased for both groups.
- The **Hispanic** student passing rate was **higher** (1.1 percentage points) than it was for White students for the first time since the 2006-07 school year.
- AP participation is most common in 11<sup>th</sup> grade with 29.9% participation, but the program is popular in all grade levels. Over 14% of 9<sup>th</sup> graders participated in AP testing in 2016.
- Psychology was the most popular AP course, with nearly 4,200 students testing on that exam.

AP Exam Passing Rates, 2014-2016



**Additional Resources**

A detailed report and data tables specific to AP in Broward County may be accessed at:

<http://www.broward.k12.fl.us/sar/releases>

For further information on the AP program, see <http://apcentral.collegeboard.com/home>

**THE SCHOOL BOARD OF BROWARD COUNTY, FLORIDA**

**DANIEL GOHL  
CHIEF ACADEMIC OFFICER**

*Signatures on File*

March 30, 2017

TO: High School Principals  
Center Principals  
Charter High School Principals

FROM: Daniel F. Gohl  
Chief Academic Officer

VIA: Valerie S. Wanza, Ph.D.  
Chief School Performance & Accountability Officer

SUBJECT: **ADVANCED PLACEMENT RESULTS, 2013-14 THROUGH 2015-16**

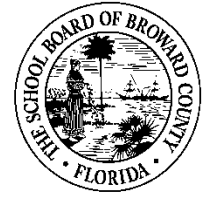
The 2015-16 Advanced Placement (AP) results indicate positive findings for Broward County Public Schools (BCPS) students, as detailed in the attached Brief. Highlighted findings include:

- **AP participation** in BCPS **decreased** by 734 (3.8%) students and 1,284 (3.6%) exams from 2013-14 to 2015-16.
- The passing rate (score of 3 or above), however, **exceeded 50%** in both 2014-15 and 2015-16. These years reflect Broward's **highest** passing rates since the 2003-04 school year.
- The passing rate **increased** by nearly 2% during **each year** under examination, from 48.7% in 2013-14 up to 52.6% in 2015-16.
- Between different ethnic groups, **achievement gaps have narrowed**. The gap in passing rates between Black and White students **narrowed** by more than 3 percentage points. Proportionately more Hispanic students passed the exam than did White students. **Passing rates increased across the board for all three of these student groups.**

If you have any comments concerning this memorandum or the attached Brief, please contact **Richard Baum, Director, Student Assessment & Research at 754-321-2500**. For questions about AP courses or staff training, please contact **Bob McKinney, Advanced Studies Coordinator at 754-321-2119**.

VSW/DG/RGB/TJE/rs  
Attachments

cc: School Board Members  
Senior Leadership Team  
Cadre Directors  
Jody Perry, Director, Charter School Support



# Assessment Brief

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Number 181

Report from the Office of the Superintendent

March 2017

## ADVANCED PLACEMENT PROGRAM ENROLLMENT AND RESULTS, 2013-14 THROUGH 2015-16

This Brief presents enrollment rates and exam results for Broward County Public Schools' (BCPS) Advanced Placement (AP) program. The AP program provides an opportunity for students to partake in college-level coursework and demonstrate mastery of content on national, subject-specific examinations. AP exams are scored on a scale of 1 to 5, and many colleges and universities will award course credit for scores of 3 or higher.<sup>1</sup>

### Student Participation Rates

Table 1

*High School Enrollment and AP Exam Participation in Broward, 2013-14 through 2015-16*

Grade	High School Enrollment	AP Enrollment	<i>n</i> AP Exams	AP Participation Rate
<b>2013-14</b>				
Total	75,892	19,277	35,331	25.4
9th	19,144	3,072	3,267	16.0
10th	19,387	4,496	6,479	23.2
11th	18,925	5,983	12,203	31.6
12th	18,436	5,726	13,382	31.1
<b>2014-15</b>				
Total	77,449	18,539	33,946	23.9
9th	19,602	2,912	3,088	14.9
10th	19,368	4,219	6,135	21.8
11th	18,757	5,820	12,023	31.0
12th	19,722	5,588	12,700	28.3
<b>2015-16</b>				
Total	78,171	18,543	34,047	23.7
9th	19,703	2,840	2,917	14.4
10th	19,948	4,306	6,561	21.6
11th	18,933	5,663	11,495	29.9
12th	19,587	5,734	13,074	29.3

<sup>1</sup> For further information on the AP program, see <http://apcentral.collegeboard.com/home>

As shown in Table 1, BCPS' total high school enrollment has **increased** by 2,279 (3%) students since the 2013-14 school year, while AP participation has **decreased** by 734 (3.8%) students and 1,284 (3.6%) exams. Over a three year span, the overall AP participation rate has **decreased** by 1.7 percentage points.

AP participants took an average of 1.8 AP exams in 2015-16, though the level of participation varied across Broward's student groups (Table 2). Asian participants took more exams on average (2.3) than did students of any other group. Black (1.6) students tended to take slightly fewer exams than the district average. Hispanic students participated at the district average of 1.8 exams per student, while White students participated just above the average, at 1.9 exams. Across the three years reviewed, while there has been slight variability in the numbers of program participants and exams administered, there has been almost no variation in the average number of exams taken in aggregate or by demographic group.

Table 2  
*Number of AP Students Tested, Number of AP Examinations, and Average Number of Exams by Ethnicity in Broward County, 2013-14 through 2015-16*

Ethnicity	2013-14			2014-15			2015-16		
	<i>N</i> Tested	<i>n</i> Exams	<i>Avg. n</i> Exams	<i>N</i> Tested	<i>n</i> Exams	<i>Avg. n</i> Exams	<i>N</i> Tested	<i>N</i> Exams	<i>Avg. n</i> Exams
Broward	19,277	35,331	1.8	18,539	33,946	1.8	18,543	34,047	1.8
Asian	1,425	3,433	2.4	1,341	3,244	2.4	1,369	3,181	2.3
Black	4,593	7,308	1.6	4,416	7,117	1.6	4,337	6,957	1.6
Hispanic	6,124	10,901	1.8	6,160	11,147	1.8	6,242	11,232	1.8
Multi-ethnic	502	924	1.8	497	913	1.8	572	1,076	1.9
Native American	79	146	1.8	61	103	1.7	65	108	1.7
White	6,554	12,619	1.9	6,064	11,422	1.9	5,958	11,493	1.9

### Average Scores and Passing Rates

**Overall.** Table 3 (next page) displays three-year trends for BCPS, Florida, and the nation. Over the three-year period there has been very little movement in mean scores at the local, state, or national levels. Historically, BCPS' average scores have been similar to, or slightly higher than, Florida's average scores; but BCPS and Florida students have scored slightly below the national average.

From 2013-14 to 2015-16, Broward's passing rate increased by nearly four points, from 48.7% to 52.6%. During the same period, Florida overall demonstrated a variable passing rate that hovered in the 49-50% range, while the national rate decreased by 2.7% (from 58.7% to 56%). As with passing rates, mean scores for BCPS have been similar to or higher than Florida's overall, but lower than those of the nation.

Table 3

*Average AP Exam Scores and Passing Rates, 2013-14 through 2015-16*

	2013-14		2014-15		2015-16	
	Mean Score	Passing Rate	Mean Score	Passing Rate	Mean Score	Passing Rate
Broward	2.6	48.7	2.6	50.7	2.7	52.6
Florida	2.6	49.4	2.6	50.4	2.6	48.5
Nation	2.9	58.7	2.8	58.0	2.8	56.0

Source for Florida, National data: <https://research.collegeboard.org/programs/ap/data/participation/ap-2016>  
 “National Report” and “Florida” data files, “Public” data tab.

**By Race/Ethnicity.** Performance on AP exams has differed across student racial and ethnic groups. Asian, Hispanic, Multi-ethnic, and White students have maintained passing rates above 50% over the past three years. The proportion of Black students passing an AP exam increased notably between 2014 and 2015 – from 24.9% to 30.3% – and remained stable at 30.4% in 2016. Additionally, the mean score of Black students exceeded 2.0 for the first time in 11 years in 2015, and remained above that mark in 2016.

Table 4

*AP Passing Rates and Mean Scores in BCPS by Ethnicity, 2013-14 through 2015-16*

Ethnicity	2013-14			2014-15			2015-16		
	<i>n</i>	%	Mean Score	<i>n</i>	%	Mean Score	<i>n</i>	%	Mean Score
	Exams 3+	Exams 3+		Exams 3+	Exams 3+		Exams 3+		
Broward	17,264	48.7	2.58	17,197	50.7	2.62	17,919	52.6	2.70
Asian	1,939	56.3	2.81	1,845	56.9	2.83	1,954	61.4	2.95
Black	1,832	24.9	1.89	2,158	30.3	2.03	2,115	30.4	2.06
Hispanic	5,965	54.5	2.76	6,185	55.5	2.79	6,596	58.7	2.90
Multi-ethnic	472	51.0	2.64	488	53.5	2.64	587	54.6	2.72
Native American	60	41.1	2.34	41	39.8	2.41	51	47.2	2.59
White	6,996	55.3	2.75	6,480	56.7	2.77	6,616	57.6	2.82

Performance gaps between Black and Hispanic students and their White peers have been a long-standing concern. In the three years under examination, the gap in passing rates between Black and White students narrowed by 3.2 points, while the gap between Hispanic and White students reversed, with the percent of Hispanic students scoring a level of 3 or above exceeding that of White students by 1.1 percentage points (Table 5). Notably, **the proportion of Hispanic students passing an AP exam exceeded that of White students for the first time since the 2006-07 school year.**

Table 5

*Differences in Percent of AP Exams with a score of 3 or Above by Race/Ethnicity, 2013-14 through 2015-16*

Group	Percent of Exams 3 or Above			Change in gap 2013-14 to 2015-16
	2013-14	2014-15	2015-16	
Black	24.9	30.3	30.4	
<i>Black and White Gap</i>	<i>30.4</i>	<i>26.4</i>	<i>27.2</i>	<i>-3.2</i>
White	55.3	56.7	57.6	
<i>White and Hispanic Gap</i>	<i>0.8</i>	<i>1.2</i>	<i>-1.1</i>	<i>-1.9</i>
Hispanic	54.5	55.5	58.7	

Table 6 shows gaps in the average exam scores. In 2016, Hispanic students' mean score was slightly higher than White students', by .08 points. Black students' mean score was .76 points lower than White students. Across the three years, **the gap between Black and White students' scores narrowed by .10 points, while the gap between Hispanic and White students' scores reversed, with Hispanic students scoring .07 points higher than White students.**

Table 6

*Differences in Mean AP Exam Scores in BCPS by Ethnicity, 2013-14 through 2015-16*

Group	Mean Exam Score			Change in gap 2012-13 to 2014-15
	2013-14	2014-15	2015-16	
Black	1.89	2.03	2.06	
<i>Black and White Gap</i>	<i>.86</i>	<i>.74</i>	<i>.76</i>	<i>-.10</i>
White	2.75	2.77	2.82	
<i>White and Hispanic Gap</i>	<i>-.01</i>	<i>-.02</i>	<i>-.08</i>	<i>-.07</i>
Hispanic	2.76	2.79	2.90	

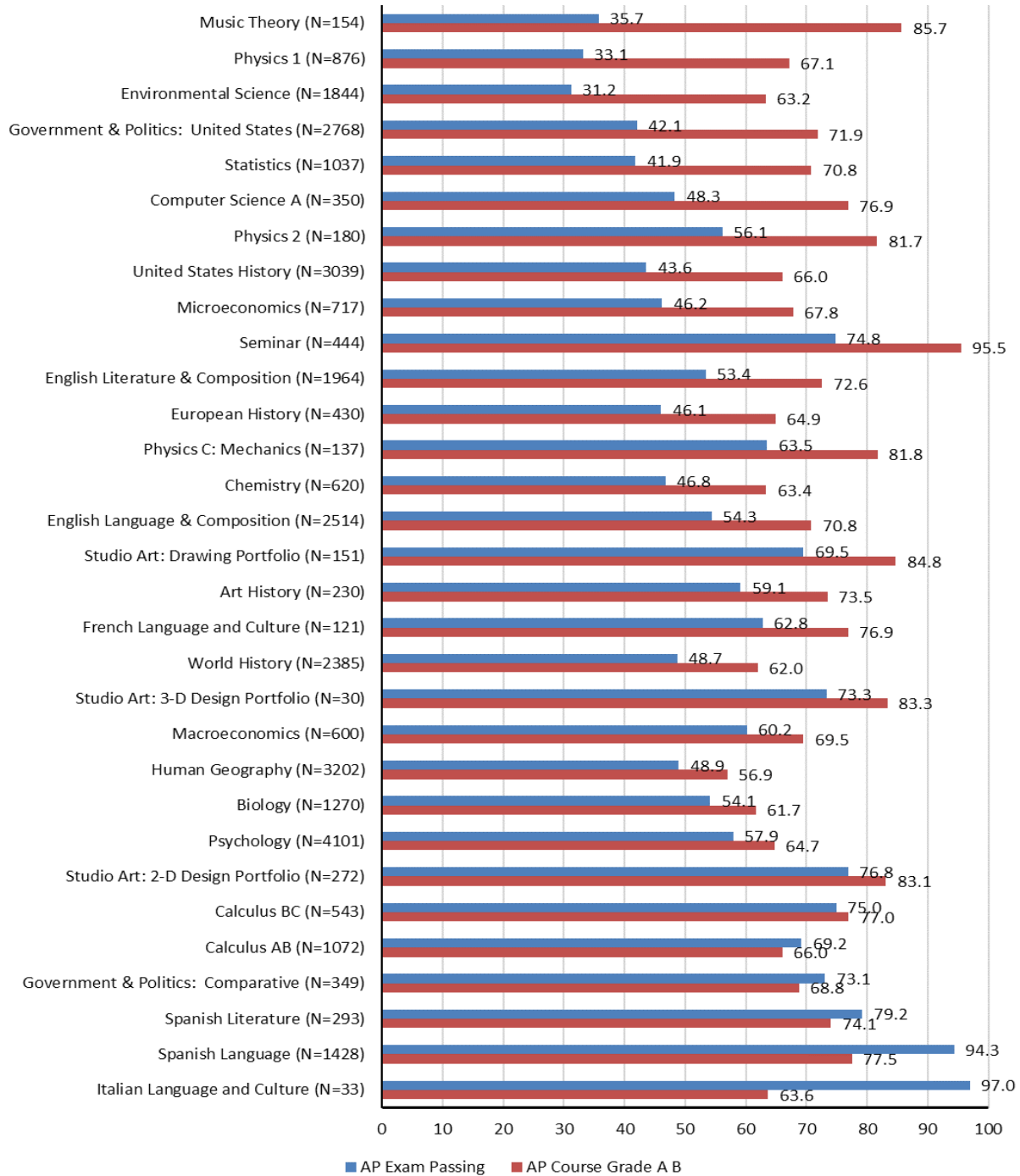
### Relationship Between Exam Passing Rates and Course Grades

Figure 1 (next page) examines the relationship between AP exam passing rates and course grades. It displays, by AP subject area, the percent of students earning an exam score of 3 or higher compared to the percent of students earning a course grade of A or B. The subjects are sorted in the figure by magnitude of discrepancy between AP exam passing rate and course grade rate – from the largest discrepancy to the smallest. Only subjects with more than 20 students who have both exam scores and course grades are included.

The difference between classroom grades and AP exam performance varied across subject areas. There were ten subjects in which the discrepancy between the percent of students achieving a level 3 or above on the exam and the percent of students receiving an A or B in the course was between 20 and 50 percentage points: Capstone Seminar, Computer Science, Environmental Science, Microeconomics, Music Theory, Physics 1, Physics 2, Statistics, US Government and Politics, and US History. The large discrepancies between class grades and exam passing rates suggest expectations for the class do not align well with the rigor of the exams. Five subjects saw

more students passing the AP exam than earning an A or B in coursework: Calculus AB, Comparative Government and Politics, Spanish Literature, Spanish Language, and Italian Language.

Figure 1. AP Exam Passing Rates and Course Grades, 2015-16



The most popular AP subjects – based on student participation – were Psychology (4,173 students), Human Geography (3,228), and US History (3,051). The subjects with the highest exam passing rates were Spanish Language (94.4%), Spanish Literature (78.7%), and Studio Art – 2-D Design Portfolio (76.4%). Conversely, the subjects with the lowest exam passing rates were Environmental Science (31.5%), Physics 1 (33.2%), and Music Theory (35.7%). Note these data account for all AP exam results and thus differ slightly from that presented in Figure 1, which provides data only for those cases where students have both an exam score and a course grade.

### **Summary**

Across the three years examined in this Brief, overall high school enrollment increased while the number of students participating in AP testing decreased slightly. The average number of exams taken per student remained unchanged, and the proportion of exams passed with a score of 3 or higher increased by about 2 percentage points each year.

Historically, there has been a gap between the passing rates of different racial/ethnic groups. The gap between Black and White students narrowed by 3.2 percentage points across the three years. The gap between Hispanic and White students reversed, with the percent of students achieving a level 3 or above exceeding White students by 1.1 percentage points. The 2015-16 school year marks the first time since the 2006-2007 school year that Hispanic students performed better than their White peers.

Several courses had a substantial number of students (20% or more) who earned an A or B in the class but did not pass the AP exam. This may suggest a misalignment between classroom expectations and exam expectations.

### **Appendices**

Additional school- and exam-level data are provided in the appendices. Appendix A provides three years of districtwide passing rates by AP exam. Appendix B provides 2015-16 passing rates for each AP exam by school. Appendix C provides aggregate AP exam results by school over a three-year period.



## References

College Board. (2016). *AP Program participation and performance data*. New York. Retrieved from <https://research.collegeboard.org/programs/ap/data/participation/ap-2016> on Feb 17, 2017.

### *Prepared by*

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