

ASSESSMENT BRIEF

DEPARTMENT OF TEACHING AND LEARNING

DEPARTMENT OF PLANNING, INNOVATION, AND ACCOUNTABILITY – DECEMBER 20, 2017

Advanced Placement Results for 2016-2017

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ABSTRACT

Enrollment data and exam results from the Virginia Beach City Public Schools (VBCPS) Advanced Placement (AP) program for the 2016-2017 academic year are summarized in this assessment brief. AP data at the school, division, state, and national level are included, along with AP results and information from previous years. During the 2016-2017 year, 7,022 VBCPS students accounted for over 13 thousand AP course enrollments, including 42 percent of all sophomores, juniors, and seniors who attended one of the 11 comprehensive high schools or Green Run Collegiate. There were also 5,217 Virginia Beach students who took at least one AP Exam in 2016-2017. This meant that approximately 72 percent of the VBCPS AP course enrollees chose to take the optional exam for the course they took during the school year. The percent of AP Exams administered at VBCPS schools that received scores of 3 or higher was 56.6 percent, which was one-half of a percentage point higher and 7 points lower than the percent of AP Exams taken by public school students across the state and nation, respectively. Compared to the previous school year, all but one VBCPS school that offered AP courses maintained or increased its AP enrollment percentages, five schools maintained or increased their exam participation rates, and half of the 12 schools maintained or increased the percent of AP Exams that received scores of 3, 4, or 5.

KEY TOPICS:

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BACKGROUND

Since 1955, the College Board’s Advanced Placement (AP) program has given high school students the opportunity to take college-level courses and receive college credit for qualifying scores on rigorous, end-of-course examinations. The AP program continues to grow each year; more than 2.7 million students took an AP Exam during the 2016-2017 academic year.

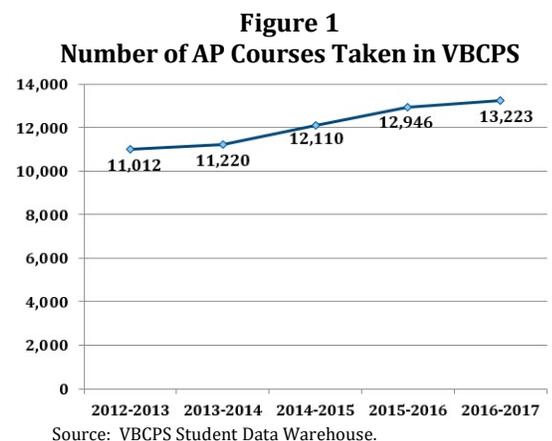
This assessment brief summarizes results from the Virginia Beach City Public Schools (VBCPS) AP program and provides comparisons between data at the school, division, state, and national levels. Information in this report were obtained primarily from the VBCPS Student Data Warehouse and AP summary reports provided by the College Board.

ENROLLMENT IN AP COURSES

During the 2016-2017 school year, VBCPS students took 33 of the College Board’s 37 AP courses. This included online classes offered by Virtual Virginia (VVa), a Virginia Department of Education program. As shown in Figure 1, VBCPS students took over 13 thousand AP classes during the 2016-2017 year. Since 2012-2013, VBCPS has experienced an increase of 20 percent in AP class enrollment.

Many students take two or more AP classes during a given school year. A total of 7,022 VBCPS students took the 13,223 AP classes in 2016-2017. This was an increase of approximately 200 more students from the 2015-2016 year. Although a few freshmen take AP courses, the preponderance of enrollees are sophomores, juniors, and seniors. During the 2016-2017 year, 42 percent of all VBCPS students in grades 10-12 took at least one AP class, which was a slight increase from the previous school year.

Table 1 on the following page shows the number of 2016-2017 AP course enrollees for each major racial/ethnic group in Virginia Beach. Also shown are the percentages that each group of students represented among the total number of students enrolled in AP courses and among all VBCPS high



school students as of September 30, 2016. Groups with fewer than 20 students were not included in the table. Female AP course enrollees outnumbered male enrollees in every racial/ethnic group. A comparison of course enrollment percentages with high school membership percentages revealed that the following groups were underrepresented in the Virginia Beach AP program: African American/Black females and males, Hispanic/Latino males, multiracial males, and White males.

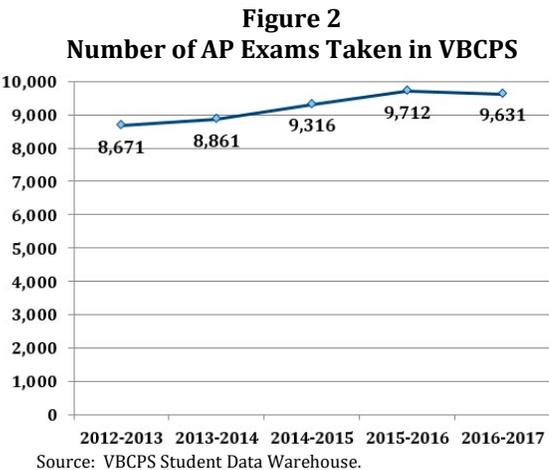
Table 1
AP Course Enrollees and VBCPS High School Membership by Race/Ethnicity and Gender for 2016-2017

Group	African American/Black			Asian/Pacific Islander			Hispanic/Latino			Two or More Races			White			All VBPCS		
	female	male	total	female	male	total	female	male	total	female	male	total	female	male	total	female	male	total
Unduplicated Student Count of AP Enrollees	583	362	945	425	300	725	343	252	595	301	219	520	2,373	1,850	4,223	4,034	2,988	7,022
Percentage of All AP Course Enrollees	8.3	5.2	13.5	6.1	4.3	10.3	4.9	3.6	8.5	4.3	3.1	7.4	33.8	26.3	60.1	57.4	42.6	100
Percentage of Students in Membership (HS)	12.0	12.6	24.6	3.5	3.4	6.9	4.8	4.9	9.7	3.7	3.8	7.5	24.5	26.5	51.0	48.7	51.3	100

Source: VBCPS Student Data Warehouse.

AP EXAM PARTICIPATION AND PERFORMANCE

Every AP course concludes with an optional, college-level examination. Students may register for an AP Exam even if they were not enrolled in the corresponding course. Except for AP Studio Art portfolio assessments, each exam includes a multiple-choice section and a free-response section.



The total number of AP Exams taken by VBCPS students over the past five years is shown in Figure 2. Exam participation increased steadily until the 2016-2017 school year, when it decreased by less than 1 percent. A number of students take more than one AP Exam; 5,217 students took all of the 9,631 examinations administered in Virginia Beach schools in 2016-2017. This was only 8 fewer VBCPS examinees than during the 2015-2016 year.

Table 2 below shows the percentage of students by race/ethnicity who attended a public school and took at least one AP Exam. The percentages are shown for VBCPS, the Commonwealth of Virginia, and the nation. The total number of AP examinees at the division, state, and national levels are included in parentheses, and Virginia Beach data for the 2015-2016 school year are provided for comparisons.

The percent of AP examinees in the Asian/Pacific Islander and Hispanic/Latino groups in Virginia Beach decreased somewhat from the previous year, while the VBCPS multiracial and White groups increased. The percent of African American/Black students who took an AP Exam in VBCPS did not change over two years. Virginia Beach had a greater proportion of African American/Black, multiracial, and White examinees than the state and the nation, but a lower percent of Hispanic/Latino AP examinees than Virginia and the nation. About one-fourth of all students nationally who took an AP Exam in 2016-2017 were of Hispanic/Latino heritage, and the percentage of White AP examinees, nationally, was slightly less than half.

Table 2
Public School AP Examinees by Race/Ethnicity – Division, State, and National Levels

Racial/Ethnic Group	2015-2016		2016-2017	
	Virginia Beach City Public Schools (n=5,225)	Virginia Beach City Public Schools (n=5,217)	Public Schools Virginia (n=71,870)	Public Schools National (n=2,369,293)
	Percent of Total	Percent of Total	Percent of Total	Percent of Total
African American/Black	10.4%	10.4%	9.7%	7.6%
Asian/Pacific Islander	11.7%	11.4%	14.3%	11.9%
Hispanic/Latino	8.4%	7.7%	11.4%	24.2%
Two or More Races	6.8%	7.5%	6.6%	4.4%
White	62.3%	62.9%	56.7%	49.9%

Sources: VBCPS Student Data Warehouse, AP Virginia Summary Report 2017, and AP National Summary Report 2017. Notes: n = total number tested. Column percentages do not add up to 100 due to decimal rounding and because some racial/ethnic groups were not included in the table.

Table 3 on the next page contains a list of the AP courses that VBCPS students enrolled in during the 2016-2017 school year. The table includes these data for each course: the course title; the number of course enrollees; the percentage of students who earned an A or B; the percentage of enrollees who took the course exam; and the percentage of AP Exams that received scores

of 3, 4, or 5 on the College Board’s five-point scale. According to the College Board, the “College Course Grade Equivalent” for an AP Exam score of 5 is A+ or A; the college course equivalent for an AP Exam score of 4 is A-, B+, or B; and an exam score of 3 is equivalent to a college grade of B-, C+, or C.¹ The College Board also states that “nearly all colleges and universities in the United States ... grant credit and placement for AP scores or acknowledge AP scores in the admission process.”² Almost 80 percent of the 13,223 VBCPS course enrollments culminated with a final grade of A or B, and 56.6 percent of the AP Exams taken by Virginia Beach students received a score of 3, 4, or 5. This was higher than the percentage of AP Exams taken by public school students across the nation that were scored at 3 or above, but lower than the percentage for public school students across the state.

Table 3
AP Course Enrollment, Percentage of Enrollments With Grades of A or B, AP Exam Participation Rates, and Percentage of Exams With Scores of 3 or Higher for 2016-2017

AP Course	Number of VBCPS Students Enrolled in the AP Course	Percent of VBCPS Enrollees Who Received a Grade of A or B	Percent of VBCPS Course Enrollees Who Took the Exam	Percent of Exams With Scores of 3-5 VBCPS	Percent of Exams With Scores of 3-5 Virginia Public	Percent of Exams With Scores of 3-5 Nation Public
Art History	104	91.4%	76.0%	65.4%	66.7%	59.8%
Biology	789	80.6%	67.9%	58.6%	67.8%	62.4%
Calculus AB	680	74.1%	84.6%	56.2%	61.5%	56.1%
Calculus BC	250	81.6%	93.2%	67.4%	82.4%	79.7%
Chemistry	362	70.2%	77.9%	45.6%	56.2%	49.8%
Chinese Language & Culture	3	100.0%	100.0%	100.0%	94.2%	92.3%
Comparative Government & Politics	42	88.1%	73.8%	78.8%	63.9%	67.1%
Computer Science A	261	83.1%	44.1%	48.5%	68.5%	66.6%
English Language & Composition	1,112	80.0%	79.1%	64.3%	64.0%	52.7%
English Literature & Composition	795	84.5%	60.0%	61.8%	61.7%	49.7%
Environmental Science	920	81.9%	60.5%	44.0%	51.8%	48.5%
European History	869	72.0%	76.2%	41.4%	52.5%	53.8%
French Language & Culture	40	97.5%	75.0%	90.9%	74.6%	70.8%
German Language & Culture	19	94.7%	79.0%	61.1%	69.3%	73.1%
Human Geography	1,299	75.7%	72.4%	52.5%	59.9%	48.0%
Japanese Language & Culture	11	100.0%	81.8%	100.0%	89.7%	74.0%
Latin	43	97.7%	97.7%	81.0%	64.3%	57.6%
Macroeconomics	21	90.5%	66.7%	60.0%	68.8%	55.2%
Microeconomics	21	90.5%	71.4%	70.6%	73.6%	67.3%
Music Theory	35	77.1%	71.4%	81.5%	59.8%	60.3%
Physics C: Electricity & Magnetism	66	77.3%	72.7%	85.7%	76.0%	69.3%
Physics C: Mechanics				81.3%	75.1%	78.5%
Physics 1	334	82.3%	63.5%	50.2%	39.5%	39.4%
Physics 2	43	83.7%	69.8%	93.3%	46.8%	60.4%
Psychology	927	76.6%	74.5%	75.9%	70.3%	63.4%
Spanish Language & Culture	193	91.2%	80.8%	84.5%	90.4%	88.1%
Spanish Literature	29	96.6%	72.4%	86.4%	81.9%	71.3%
Statistics	640	71.3%	67.7%	46.9%	51.5%	52.8%
Studio Art: 2-D Design	60	93.3%	61.7%	83.0%	87.6%	84.5%
Studio Art: 3-D Design	9	100.0%	33.3%	100.0%	75.3%	70.5%
Studio Art: Drawing	53	92.5%	71.7%	93.1%	86.4%	85.0%
U.S. Government & Politics	1,536	88.3%	73.6%	58.7%	63.9%	48.4%
U.S. History	1,568	76.2%	69.9%	44.7%	59.3%	48.7%
World History	89	88.8%	44.9%	45.2%	70.2%	53.6%
Total	13,223	79.6%	71.5%	56.6%	63.8%	56.1%

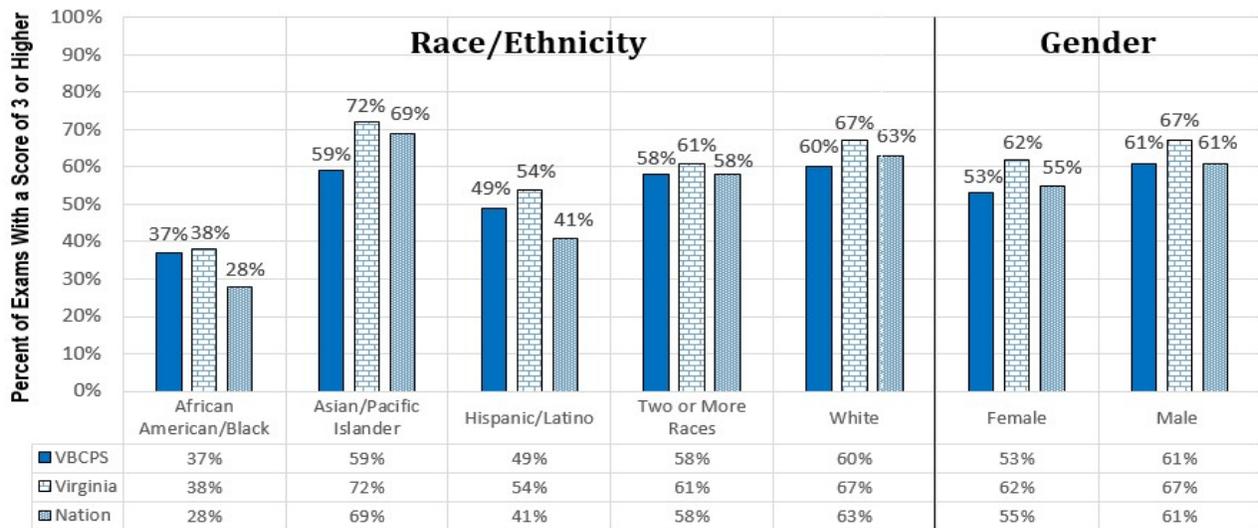
Sources: VBCPS Student Data Warehouse, AP Virginia Summary Report 2017, and AP National Summary Report 2017.

¹College Board, AP Higher Education: AP Exam Scores, <https://aphighered.collegeboard.org/courses-exams/scoring>, accessed on December 14, 2017.

²College Board, AP Students: How to Earn Credit for Your Scores, <https://apstudent.collegeboard.org/creditandplacement/how-to-earn-credit-for-your-scores>, accessed on December 14, 2017.

Figure 3 provides comparisons of AP Exam performance for the five largest racial/ethnic groups of public school students at the division, state, and national levels. Gender data are included for VBCPS examinees as well as for all state and national examinees, regardless of the type of school they attended during the 2016-2017 year. For each group, the percent of AP Exams with scores of 3, 4, or 5 was higher at the state level than for VBCPS. These groups of VBCPS students had the same or higher percentages of exams with scores of 3 or above than their counterparts at the national level: African American/Black students, Hispanic/Latino students, multiracial students, and male students.

Figure 3
AP Exam Performance by Race/Ethnicity and Gender for 2016-2017



Sources: VBCPS Student Data Warehouse, AP Virginia Summary Report 2017, and AP National Summary Report 2017.

AP ENROLLMENT AND EXAM RESULTS BY SCHOOL

Table 4 shows enrollment data for AP courses taken during the 2016-2017 school year at all VBCPS comprehensive high schools and Green Run Collegiate. The table shows the number of students enrolled at each school as of September 30, 2016; the number of AP course enrollments (i.e., duplicated count); the number of students who enrolled in at least one course (i.e., unduplicated count); the percent of students enrolled in AP courses; and the number of AP courses taken at each school. Changes from the previous school year for the percent of students enrolled and the number of courses taken appear in the “Increase/Decrease from 2015-2016” columns. Overall, there were slight increases from 2015-2016 in VBCPS course enrollment and the number of courses.

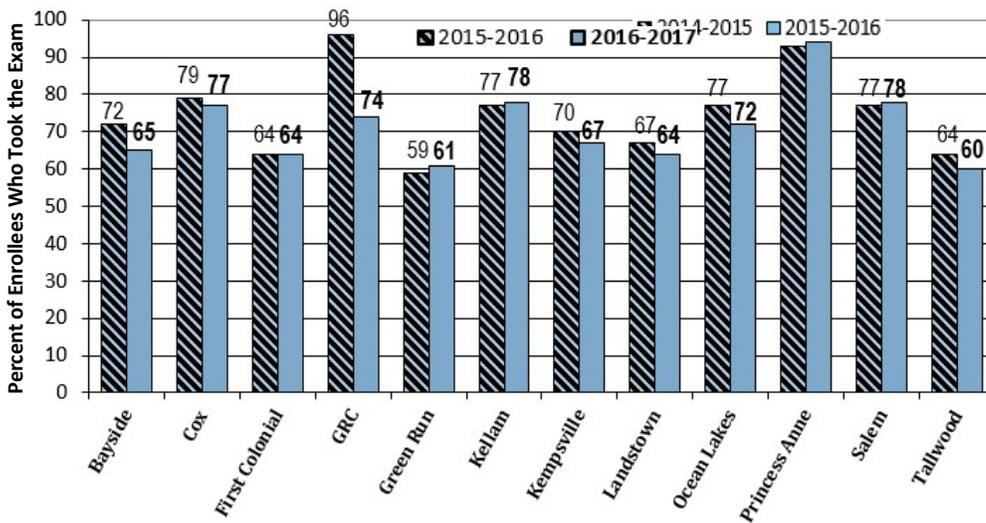
Table 4
AP Course Enrollment in 2016-2017 for Virginia Beach High Schools

High School	Total Number of Students	Number of AP Enrollments (Duplicated Count)	Unduplicated Count of Students	Percent of Students Enrolled in AP Courses	Increase/Decrease from 2015-2016	Number of AP Courses Taught	Increase/Decrease from 2015-2016
Bayside	1,786	903	514	29%	+ 2%	17	- 1
Cox	1,771	1,535	710	40%	+ 1%	28	no change
First Colonial	1,855	1,267	647	35%	+ 1%	25	- 2
Green Run Collegiate	363	34	32	9%	no change	4	+ 2
Green Run	1,422	614	356	25%	+ 2%	17	+ 1
Kellam	2,001	1,659	834	42%	+ 4%	24	- 2
Kempsville	1,538	795	473	31%	+ 6%	17	no change
Landstown	2,173	1,366	740	34%	+ 4%	27	+ 4
Ocean Lakes	2,092	1,613	782	37%	+ 1%	31	+ 4
Princess Anne	1,810	1,131	627	35%	- 5%	32	+ 5
Salem	1,669	1,000	581	35%	no change	21	- 1
Tallwood	1,937	1,306	726	37%	no change	23	no change
Total	20,417	13,223	7,022	34%	+ 1%	average = 22	+ 1

Source: VBCPS Student Data Warehouse.

The AP Exam participation rates for VBCPS high schools and Green Run Collegiate (GRC) for the 2015-2016 and 2016-2017 years are shown in Figure 4. Exam participation among AP course takers in 2016-2017 ranged from 60 percent at Tallwood High School

Figure 4
AP Exam Participation for Course Enrollees by High School



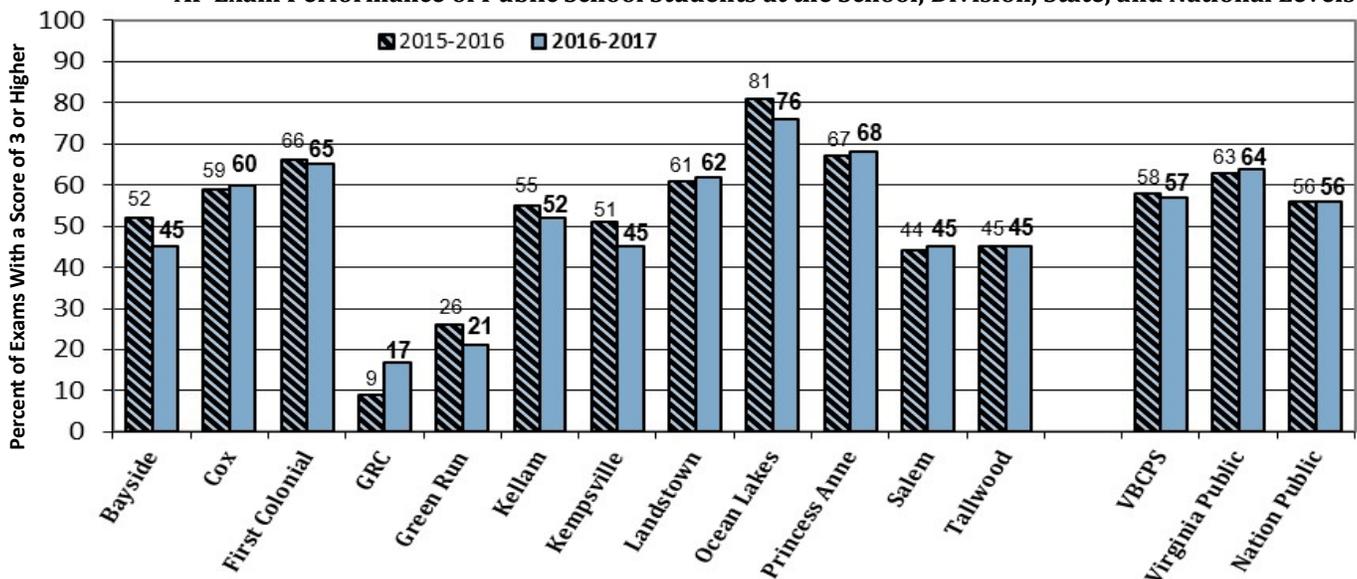
Source: VBCPS Student Data Warehouse.

High School for 2016-2017. Five schools had higher percentages than the VBCPS percentage of AP Exams scored at 3, 4, or 5, and another five schools had increases from the 2015-2016 school year in the percentage of exams with scores of 3 or above: Cox, GRC, Landstown, Princess Anne, and Salem. First Colonial, Ocean Lakes, and Princess Anne high schools recorded higher percentages of AP Exams with scores of 3, 4, or 5 than the percentage of AP Exams with scores of 3 or above taken by public school students across the Commonwealth of Virginia.

to 94 percent at Princess Anne High School. For the entire division, the AP Exam participation rate was 72 percent. Five schools—Cox, GRC, Kellam, Princess Anne, and Salem—had participation rates that were higher than 72 percent, and four schools saw increases in their AP Exam participation rates from the previous year.

Figure 5 below shows the percent of AP Exams that received scores of 3 or above at VBCPS high schools, GRC, and the division, as well as at public schools across the state and nation for 2015-2016 and 2016-2017. Percentages ranged from 17 percent at GRC to 76 percent at Ocean Lakes

Figure 5
AP Exam Performance of Public School Students at the School, Division, State, and National Levels



Sources: VBCPS Student Data Warehouse, AP Virginia Summary Report 2017, and AP National Summary Report 2017.

SUMMARY

During the 2016-2017 school year, students in Virginia Beach City Public Schools took over 13 thousand Advanced Placement classes. Forty-two percent of all VBCPS high school sophomores, juniors, and seniors were enrolled in at least one AP class. Despite the increase in AP course enrollment in Virginia Beach, there were slightly fewer AP Exams taken by VBCPS students than in the previous school year. Out of 9,631 AP Exams administered for the 33 different AP courses offered in Virginia Beach schools, approximately 57 percent received scores of 3, 4, or 5. This was higher than the percentage of AP Exams with scores of 3 or above at the national level, but lower than the percentage of AP Exams that received scores of 3 or above in Virginia.