District of Columbia
Office of the State Superintendent of Education

The Postsecondary Access and Readiness Series

Part II: College Readiness and Access Metrics Across Three Adjusted Cohorts

Introduction

The District of Columbia has one of the most educated populations in the United States, with almost 70 percent of residents between the ages of 25 and 34 holding a college degree in 2010, the year of the last decennial census.[1] Increasingly, people living in the District need postsecondary education in order to be competitive in the local economy. The Georgetown Center on Education and the Workforce estimates that by 2020, 76 percent of all jobs in the District of Columbia will require some postsecondary education.[2]

In order to better prepare DC residents for the new economy, there is a growing need to provide educators, schools, and community leaders with information about whether students are on track for successful transition to postsecondary pathways. Having identified this need, the Office of the State Superintendent of Education (OSSE) has increased efforts to provide educators and the community with information on the college and career readiness of DC students. Beginning in 2015, OSSE began administering the Partnership for the Assessment of Readiness for College and Careers (PARCC) assessments for students in grades 3-8 and high school students. The PARCC assessments ask students to think critically, solve problems, and respond to questions that measure the skills they will need for the next grade or course, and eventually for postsecondary education. In 2016, 27 percent of all students tested met the bar to be on track for college and career readiness in English language arts, and 25 percent met that same bar in mathematics. In 2017, the third year of the assessments, 31 percent of students overall tested at the on track for college and career ready level in English language arts, and 27 percent did so in mathematics. While these results at the city level have improved over three years for students in all grades, students taking high school-level exams lag behind. In 2017 only 27 percent of students taking English language arts courses at the high school (enrolled in grades 9-12) level scored at the college and career readiness level; for math, 13 percent of students met this bar.[3]

The PARCC results provide important information about the academic readiness of students across schools and grade levels in DC. However, there are additional pieces of information that are useful for understanding college and career readiness of students in DC public schools. In the academic literature, multiple measures are correlated with success in postsecondary education, including the rigor of student coursework in high school, high school grade point average (GPA), daily attendance in class, and

[1] U.S. Department of Education. New state-by-state college attainment numbers sow progress toward 2020 goal (July 12, 2012).
[2] 1 Carnevale, A., Smith, N. & Strohl, J. Recovery: Job growth and education requirements through 2020. Washington, DC: Georgetown Center on Education and the Workforce (2013).
[3] Percentages for mathematics exams include results for all required PARCC exams in 2017. See the OSSE PARCC Results website for further results.

SAT and ACT scores.[4] In addition, one study has shown that providing assistance with the Free Application for Federal Student Aid (FAFSA) has increased the likelihood of college enrollment.[5]

This report provides additional information on DC students' postsecondary access and readiness. This includes citywide student participation on the SAT and ACT exams for the four-year adjusted graduation cohorts of 2012-13, 2013-14, and 2014-15 as well as the percentage of the cohort students who met the "college readiness" benchmark on one or both exams, as defined by College Board and the ACT. For the SAT, the benchmark set by College Board during the period of time in which these students tested is an overall score of 1550 on a 2400 point scale.[6] For the ACT, students must have met the college readiness benchmark on one of the four sections of the ACT (English=18, Reading=22, Mathematics=22, or Science=23).[7] Readers will also find participation and rates of passing (score of 3 or better) on the rigorous course-based AP exams for District of Columbia students.

In addition, this report provides information about SAT and ACT participation and performance over time for specific groups of students, including student groups by race and ethnicity, economically disadvantaged students, students with disabilities and English learner (EL) students, and differentiated by graduates and non-graduates.[8] While the metrics included do not capture all of the factors that contribute to readiness for postsecondary education and career pathways, they shed light on the preparation of DC students as they leave the secondary education system and enter college and careers.

This report is the second in a series of five reports examining citywide college access, readiness, and completion outcomes for students attending District of Columbia public schools. The report series was developed in partnership with a group of stakeholders including representation from the Deputy Mayor for Education, District of Columbia Public Schools (DCPS), the DC Public Charter School Board (PCSB), Raise DC, and a number of charter school organizations, or local education agencies (LEAs) in the District of Columbia. The first part of the series, published in July 2016, examined participation and performance rates on PSAT, SAT and ACT, AP, and FAFSA and DC Tuition Assistance Grant (DCTAG) completion for students enrolled during the 2014-15 school year. This report is the second in the series, and differs in its methodological approach. Here, outcomes are examined across three adjusted graduation cohorts of

[4] Adelman, C. The Toolbox Revisited: Paths to Degree Completion From High School Through College. Washington, DC: U.S. Department of Education, 2006.

[5] Bettinger, E.P., Long, B.T., Oreopoulos, P. The FAFSA Project: Results from the H&R Block FAFSA Experiment and Next Steps. Washington, DC: National Bureau of Economics Research, 2013.

[6] Note that with the redesigned SAT debuted by College Board in spring of 2016, the overall scoring and college readiness benchmark changed. This analysis uses the college readiness benchmark associated with testing during the 2014-15 school year or before.

[7] Meeting the SAT benchmark of 1550 indicates a 65 percent likelihood of achieving a B- average or higher during the first year of college (College Board, The SAT college and career readiness benchmark user guide). Meeting the benchmark on the ACT indicates approximately a 50 percent change of earning a B or better and approximately a 75 percent chance of earning a C or better in a corresponding college course (ACT, Inc., What are the ACT college readiness benchmarks?).

[8] This report includes results for students attending schools that focus on enrolling and graduating students who are over-age and under-credited or are "off track" of the four-year high school graduation timeline. See the appendix for further information about business rules and calculations included in this report.

students: those who were anticipated to graduate in the 2012-13, 2013-14, and 2014-15 school years. The report aims to answer the question: *How did a defined cohort of students perform during their time in high school and as they transitioned to postsecondary education?*

Data Notes

This report presents outcomes for "cohorts" of students. These groups of students are identified by their expected four-year high school graduation year. Thus, students who were first-time enrollees in grade 9 in the fall of 2011 are considered part of the 2014-15 cohort, and referred to throughout the report by the year of their anticipated graduation. OSSE uses the Adjusted Cohort Graduation Rate (ACGR) methodology to report high school graduation rates, and the findings in this report include all students assigned to the ACGR cohort. Therefore, the 2014-15 adjusted cohort includes students who began grade 9 in the 2011-12 school year, whether they completed high school in four years or not. Cohort data take into account students who have transferred or withdrawn from public schools in DC and re-enrolled in another state or a private school. These students have been removed from the denominator of the ACGR cohort as they left public schools in DC to continue their education elsewhere and are not "drop outs."

All but one of the metrics presented here include the 2014-15 cohort as the most recent group of students examined. The one exception is college enrollment. The college enrollment metric includes students who have enrolled in postsecondary education with 12 months of high school graduation. Therefore, this particular metric reports on the four-year adjusted cohorts of 2012-13 (n=4963) and 2013-14 (n=5244). Outcomes for more recent adjusted cohorts are not yet available due to a data lag from the primary data source, the National Student Clearinghouse.

See the appendix (page 16) for business rules for metrics presented in this report.

Key Finding One. Participation in SAT, ACT and Advanced Placement testing have increased over time. During the same period, performance on SAT and ACT has held steady or increased.

Students' performance on both participation and meeting one or both benchmarks has improved over time. Figure A shows the percentage of students in three recent graduating adjusted cohorts who participated in either the SAT or ACT at least once during their high school career. The percentage of students taking either the SAT or ACT has increased over the three graduating cohorts, from 54.4 percent for the 2012-13 cohort to 66.8 percent for the 2014-15 cohort. In particular, DC saw a jump in participation of almost nine percentage points from 2012-13 to 2013-14. The district-wide in-school administration of the SAT that began in spring of 2013 may have contributed to this participation increase.

SAT and ACT participation and students reaching the college ready benchmark has increased across three cohorts of students

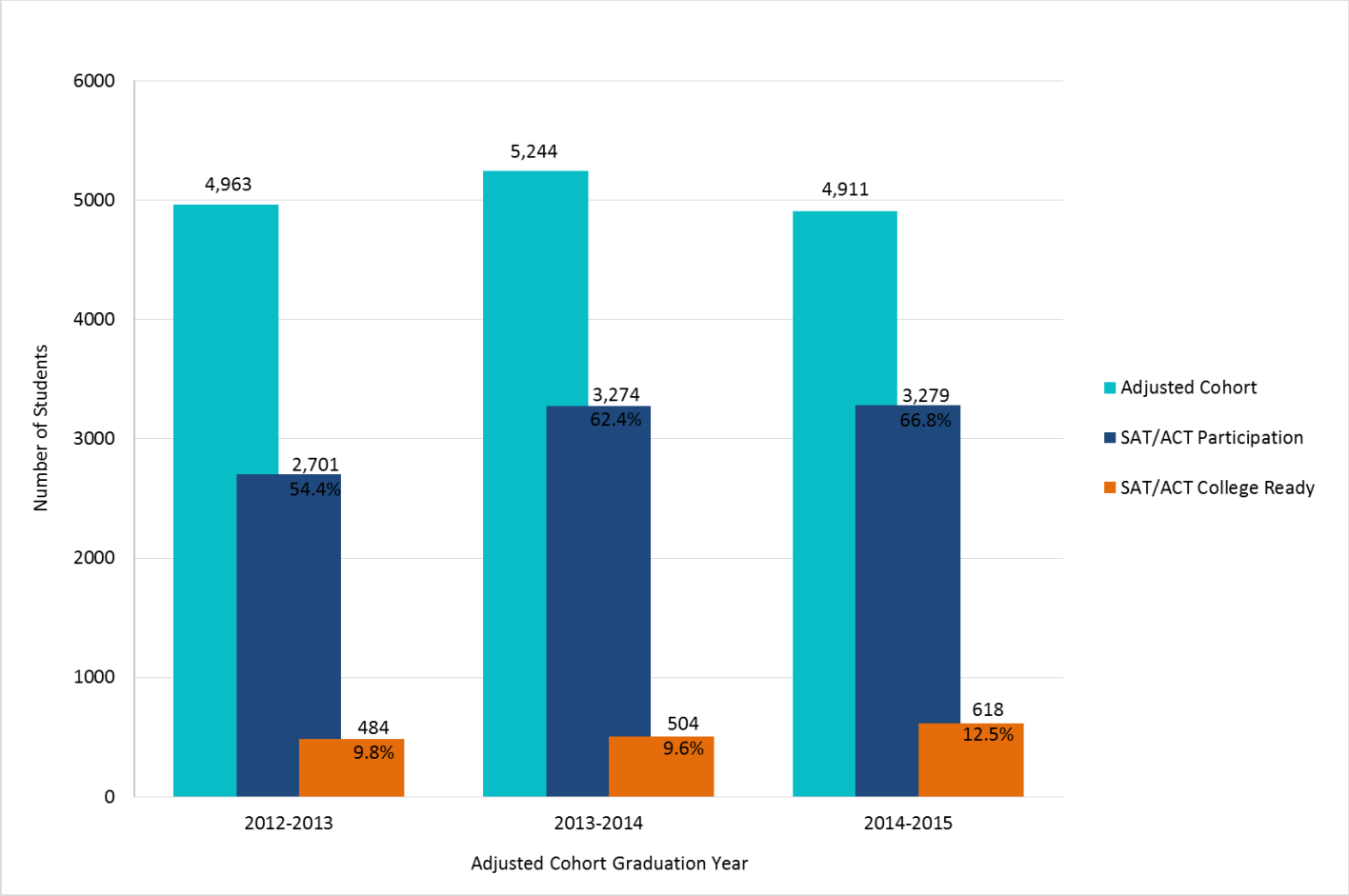

Figure A. SAT and ACT Participation and College Readiness Benchmark Achievement Across Three Cohorts

Typically, as participation in a norm-referenced test such as the SAT or ACT increases, the percentage of students achieving a benchmark score decreases. However, the opposite trend has occurred in the District of Columbia. As participation has increased, performance has either stayed relatively steady or increased. Even as the number of test takers increased by 12.4 percent across three cohorts, 18.8 percent of test-takers in the 2014-15 adjusted cohort met one or both college readiness benchmarks, compared with 17.9 percent of test-takers in the 2012-13 adjusted cohort. This trend translates into a higher percentage of the 2014-15 adjusted cohort (12.6 percent) meeting the college readiness benchmark compared with the two prior adjusted cohorts, where approximately 10 percent of the cohort met the benchmark. While the percentage of graduates meeting the college readiness benchmark on either the SAT or ACT remains low overall, this trend is a hopeful sign that more students are on track to be ready for college coursework.

Advanced Placement exam participation and score of 3+ has increased over three cohorts

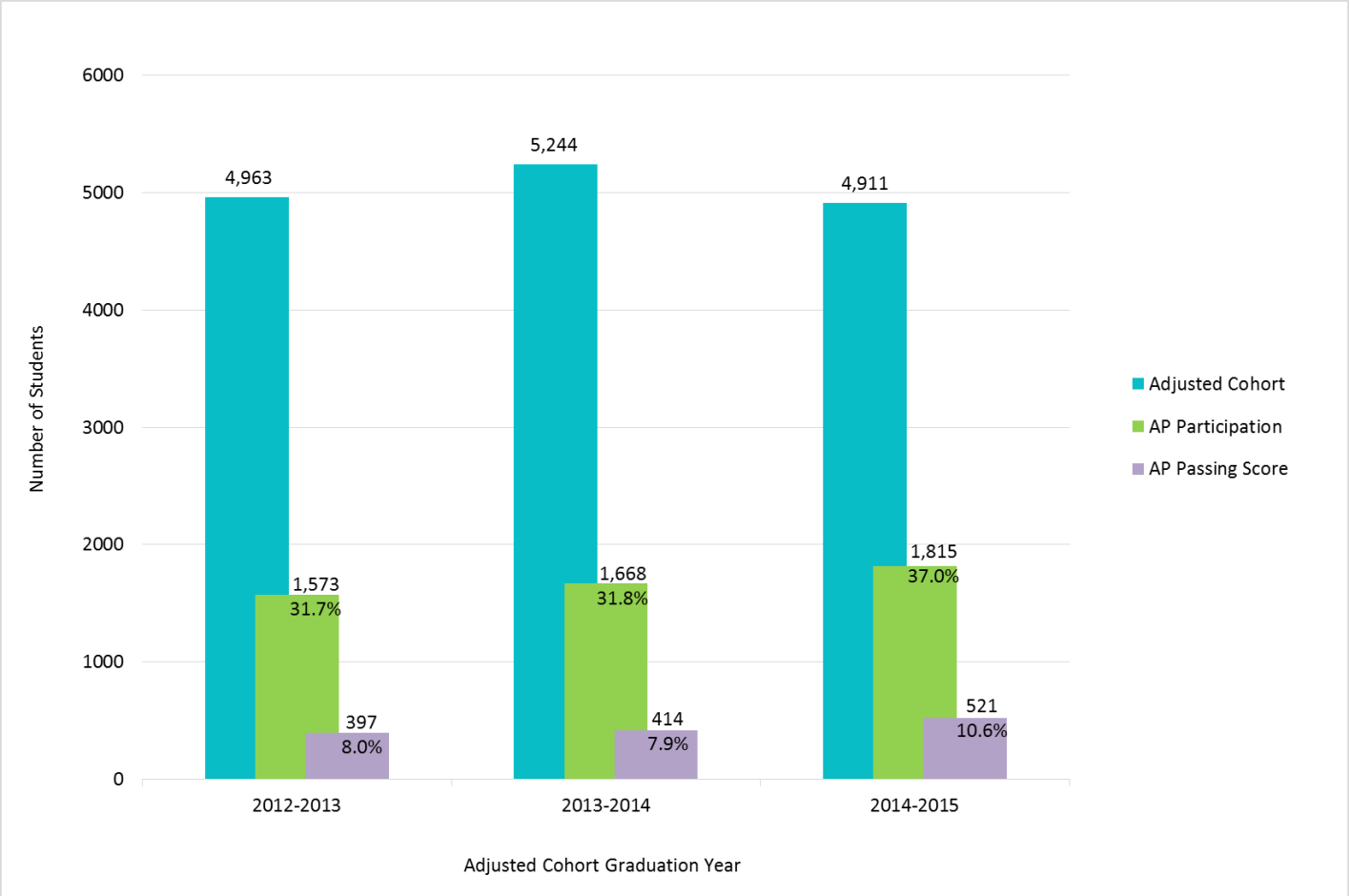

Figure B. Advanced Placement Exam Participation and Percent of Students Achieving 3+ Score

Figure B shows the number of students across the 2012-13, 2013-14, and 2014-15 adjusted cohorts who participated in AP exams as well as their performance on these exams. On AP exams, scores of 3, 4, and 5 are considered "passing" and may be eligible for college credit. Similar to SAT and ACT participation and performance, the District of Columbia has a positive trend over time. Of the 2014-15 adjusted cohort (n=4911) 37 percent participated in AP exams, and 11 percent of students received a score of 3 or higher. In both the 2012-13 and 2013-14 cohorts, approximately 32 percent of students participated in AP exams, and 8 percent of students received a score of 3 or higher.

Key Finding Two. While the District of Columbia has made progress, significant gaps in participation and performance on the SAT and ACT exist for students historically underrepresented in higher education. In addition, there is a positive relationship between graduation status and participation in SAT or ACT– students who graduated in four years were highly likely to take the SAT or ACT.

Key finding one presented an encouraging trend: that participation and performance in advanced coursework and college access exams has increased for all students over time. However, there are gaps

in participation and performance for specific groups of students who have historically been underrepresented in higher education (i.e., African-American/Black and Hispanic/Latino students, English language learners, students with disabilities, and economically disadvantaged students).

For visualizations and analysis in this section, the following table provides total numbers of students in the adjusted graduating cohorts represented in the race/ethnicity and other subgroups of students.

Table 1. N-Sizes for Student Groups

Graduating Class	Subgroup Category	Subgroup	Total Number
2013-2014	All Students	All Students	4963
2013-2014	Special Populations	Economically Disadvantaged	3806
2013-2014	Special Populations	English Language Learner	394
2013-2014	Special Populations	Special Education	1026
2013-2014	Race/Ethnicity	Black/African American	4159
2013-2014	Race/Ethnicity	Hispanic	527
2013-2014	Race/Ethnicity	Other Race	107
2013-2014	Race/Ethnicity	White	170
2014-2015	All Students	All Students	5244
2014-2015	Special Populations	Economically Disadvantaged	4309
2014-2015	Special Populations	English Language Learner	428
2014-2015	Special Populations	Special Education	1233
2014-2015	Race/Ethnicity	Black/African American	4371
2014-2015	Race/Ethnicity	Hispanic	560
2014-2015	Race/Ethnicity	Other Race	116
2014-2015	Race/Ethnicity	White	197
2015-2016	All Students	All Students	4911
2015-2016	Special Populations	Economically Disadvantaged	4045
2015-2016	Special Populations	English Language Learner	394
2015-2016	Special Populations	Special Education	1076
2015-2016	Race/Ethnicity	Black/African American	3988
2015-2016	Race/Ethnicity	Hispanic	578
2015-2016	Race/Ethnicity	Other Race	119
2015-2016	Race/Ethnicity	White	226

* There are 18 students who were verified by LEAs as being members of more than one first ninth grade cohort.
** The “Other Race” category includes American Indian, Asian, Multiracial, Pacific Islander, and Unknown races.

SAT and ACT participation gap between race/ethnicity groups has decreased over time

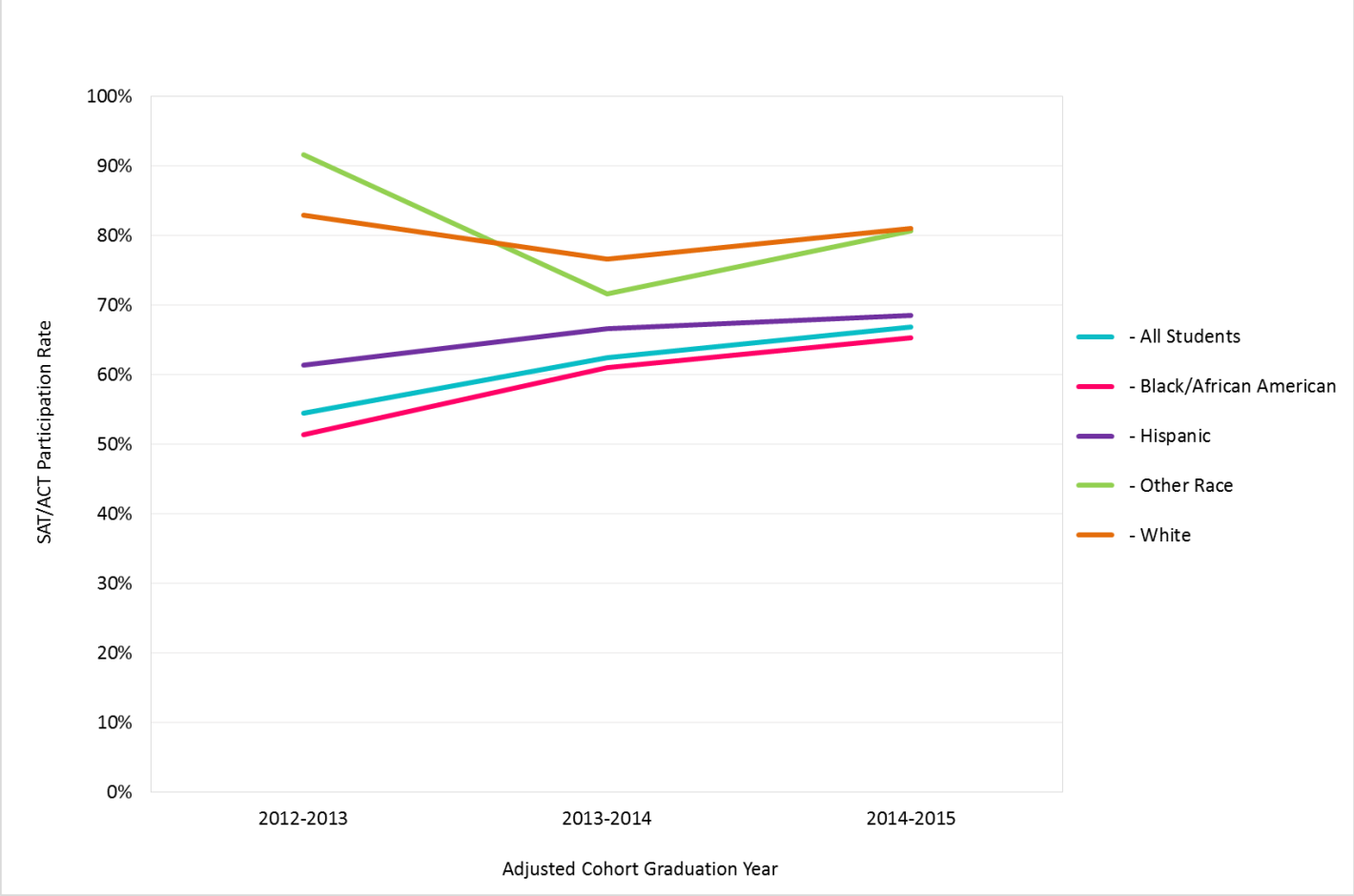

Figure C. SAT and ACT Participation by Race/Ethnicity Across Three Cohorts

Figure C shows the SAT and ACT participation for students in different racial/ethnic groups across three graduation cohorts. While white students have the highest participation rate across the three years (with the exception of students of other races in 2012-13), the gap in participation has closed since 2012-13, though increased slightly between 2013-14 and 2014-15, as participation for Black/African-American and Hispanic/Latino students has risen.

Gaps in SAT and ACT participation by race/ethnicity nearly close after accounting for graduation status

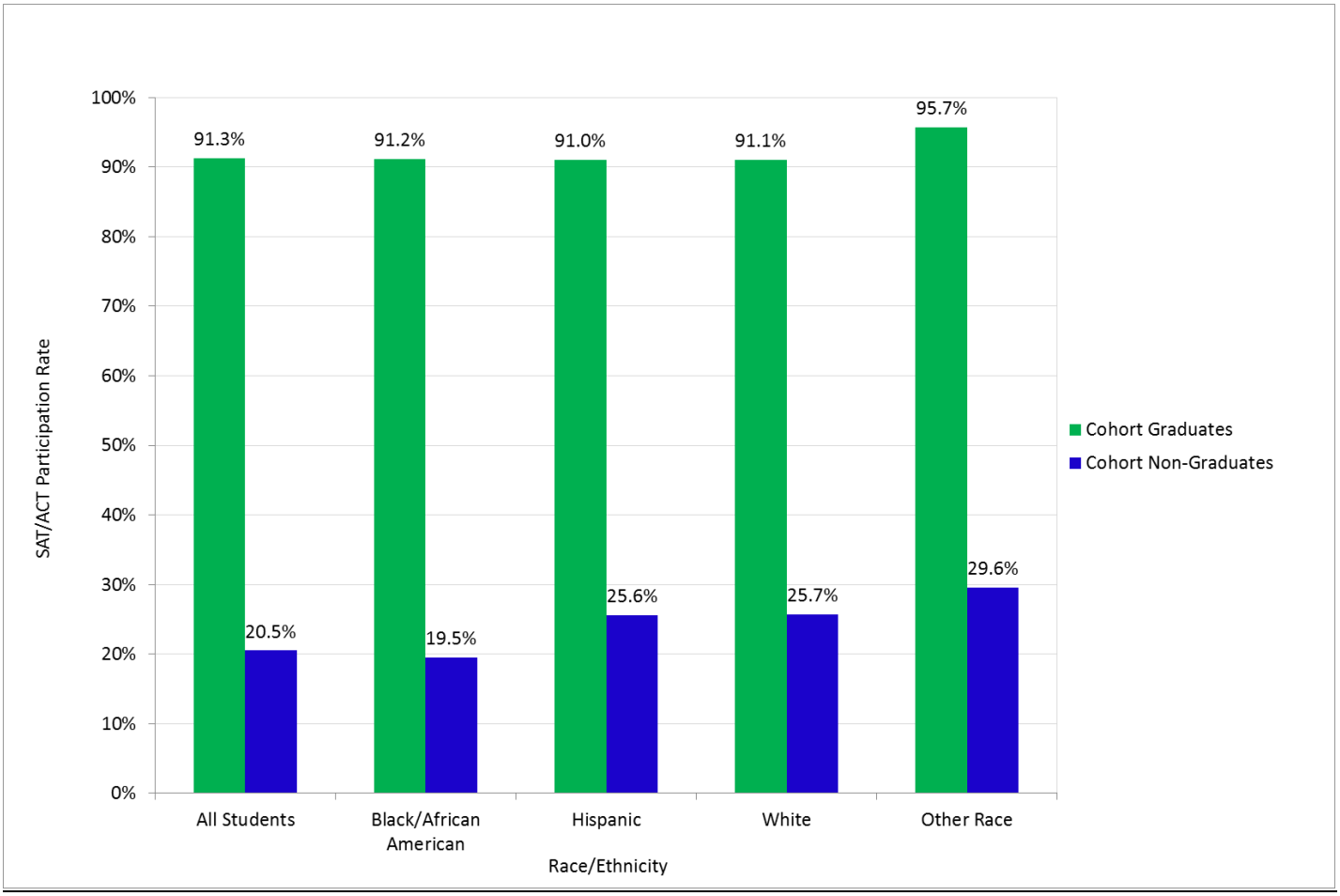

Figure D. SAT and ACT Participation by Race/Ethnicity and Graduation Status (2014-15 Adjusted Cohort)

Thus far, the analysis has shown outcomes for all students included in the four-year adjusted cohort for a given graduation year. Graphs and figures presented have therefore included students who left high school before reaching grade 11 or 12, when participation in SAT, ACT, and AP exams typically takes place. By contrast, Figure D looks at participation in the SAT or ACT of students in the 2014-15 cohort by race/ethnicity and graduation status. Students who did not graduate from high school had low rates of participation in SAT/ACT – a little more than 20 percent of all students. In addition, the gaps between race/ethnicity groups almost disappear when viewing participation by graduation status: 2014-15 four-year graduates in all race/ethnicity groups were more than 90 percent likely to take the SAT or ACT during their four years in high school.

SAT and ACT participation has increased for specific groups of students over time, however, students with disabilities still participate at a much lower rate than other groups of students

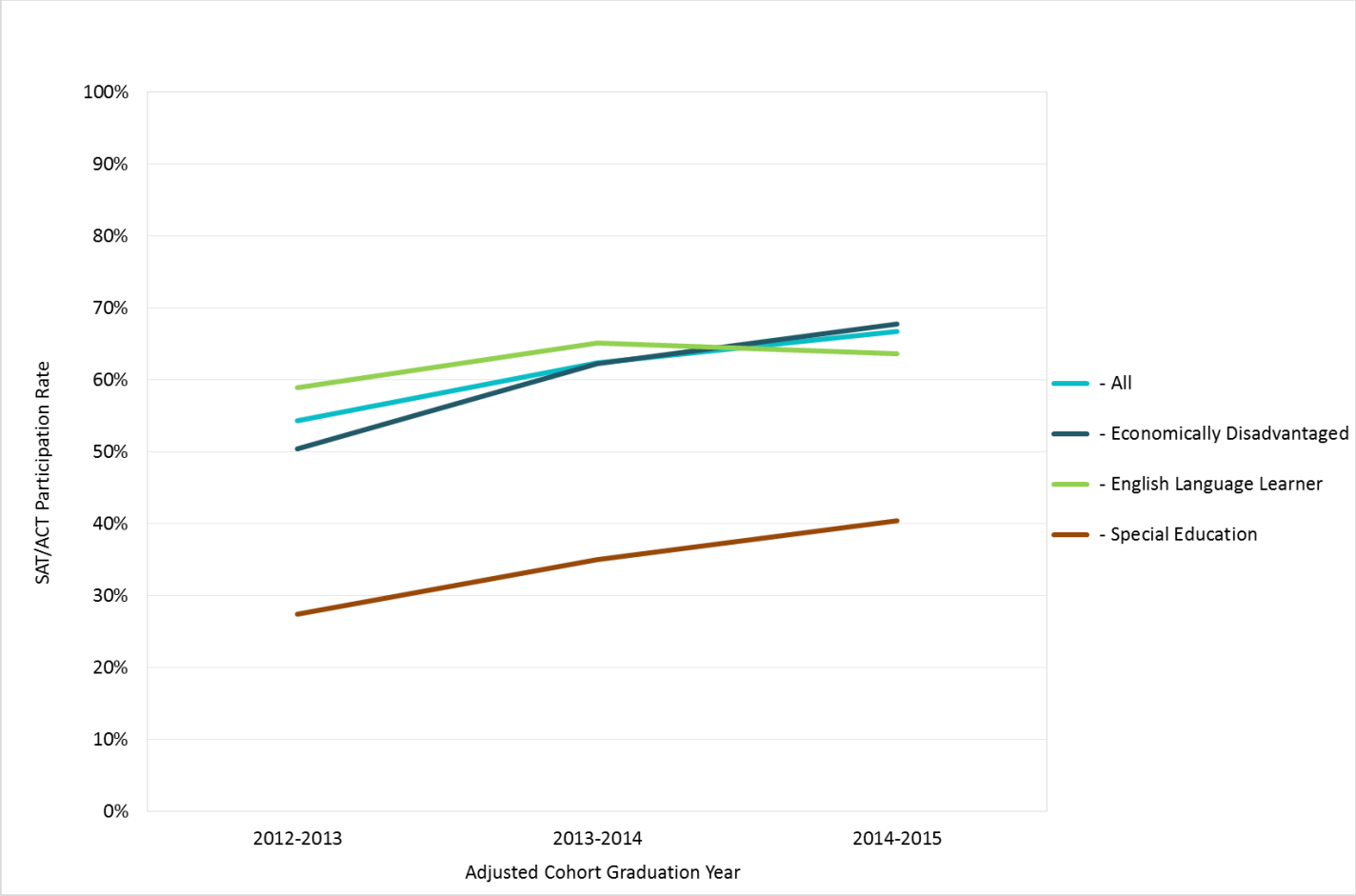

Figure E. SAT and ACT Participation for Special Populations of Students Across Three Cohorts

Figure E shows participation in SAT or ACT testing by specific groups of students: economically disadvantaged students,[9] English learners (ELs), and students receiving special education services. Students with disabilities saw the greatest increase across the three cohorts, a 25 percentage point growth between 2012-13 and 2014-15. Despite this growth, students with disabilities are still participating in SAT and ACT at a much lower rate than all students. Economically disadvantaged students show a similar pattern of growth in SAT and ACT participation to all students across the three adjusted cohorts. More EL students in the 2014-15 adjusted cohort are participating in SAT and ACT than

[9] "Economically disadvantaged" refers to a student who possesses one of the following characteristics at any point during the school year: received Free or Reduced-Price lunch (FRL); received FRL through community eligibility (attending a school where the entire student population receives FRL); direct certification recipient of Temporary Assistance for Needy Families (TANF) or Supplemental Nutrition Assistance Program (SNAP); identification as homeless; under the care of the Child and Family Services Agency (CFSA).

they were for the 2012-13 adjusted cohort, but participation declined between the 2013-14 and 2014-15 adjusted cohorts.

Gaps in SAT and ACT participation for English learners and economically disadvantaged students nearly close after accounting for graduation status; students with disabilities participate at a lower rate for both graduates and non-graduates

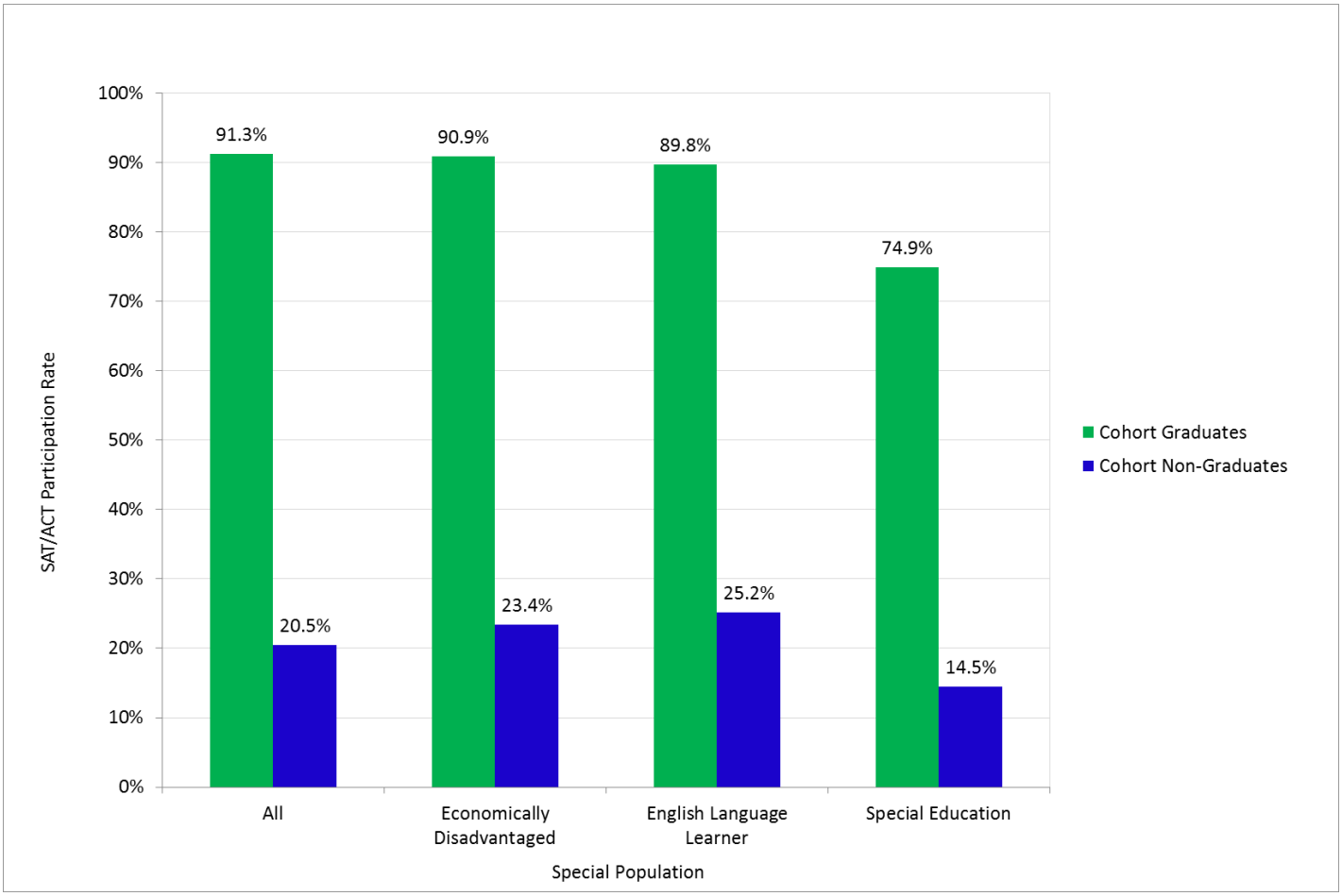

Figure F. SAT and ACT Participation by Special Populations of Students and Graduation Status (2014-15 Adjusted Cohort)

Figure F shows students in these specific groups of students who participated in SAT and ACT by graduation status for the 2014-15 cohort. Similar to Figure D, gaps in the participation rate between all students and each group are smaller when distinguishing between graduates and non-graduates. However, the gaps for students with disabilities remain larger than the other subgroups for both graduates and non-graduates.

Large gaps remain between race/ethnicity groups for students meeting the college ready benchmark on SAT or ACT across three cohorts

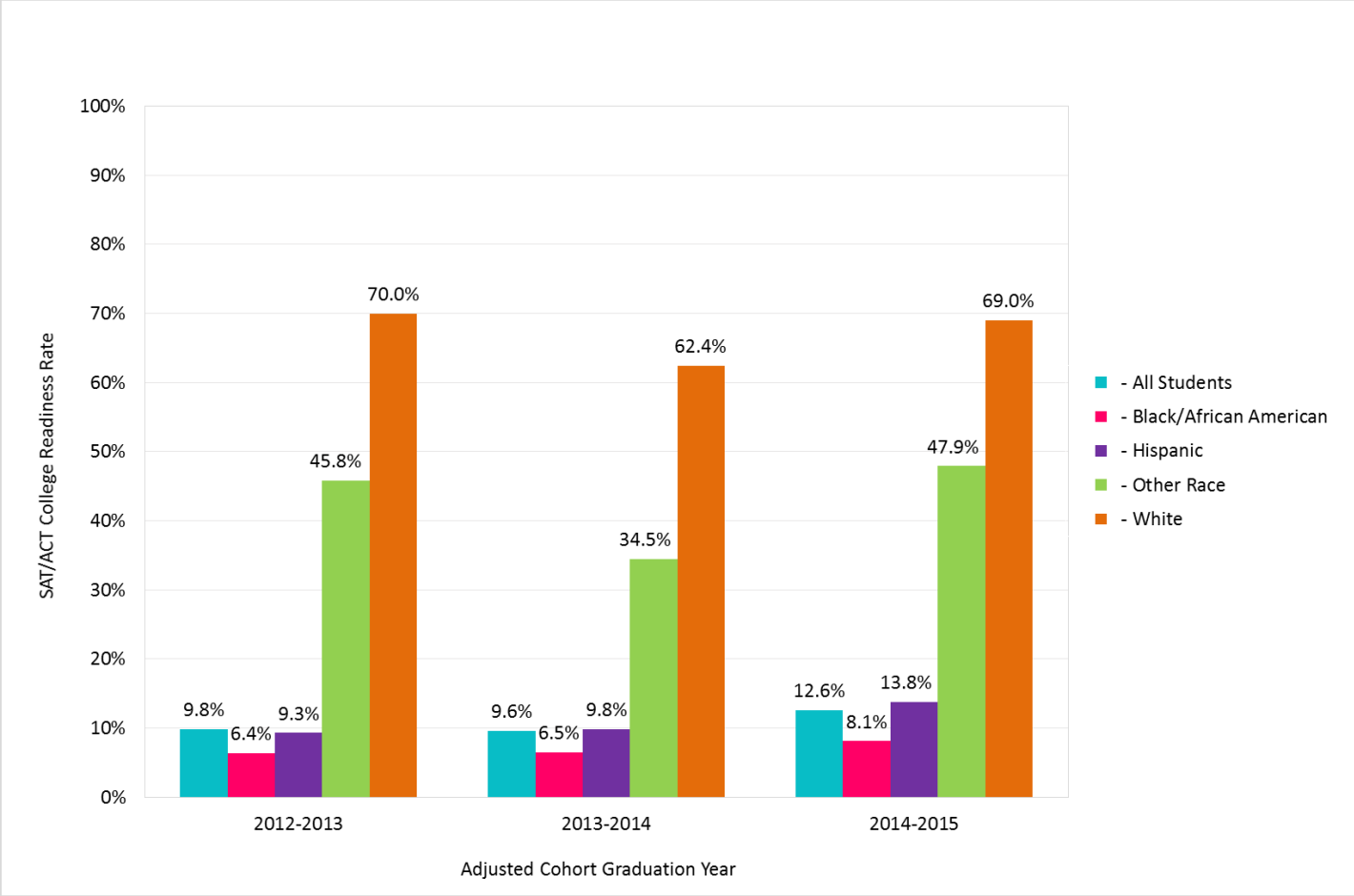

Figure G. Percentage of Students Meeting SAT and ACT College Readiness Benchmarks by Race/Ethnicity Across Three Cohorts

Key finding one looked at the percentage of students in a given cohort who met the college readiness benchmark on either the SAT or ACT. Figure G shows performance on the SAT and ACT college readiness benchmarks by race/ethnicity across the three adjusted cohorts presented in this report. While Figure G shows that percentage of students meeting one or both benchmarks has increased slightly across all racial and ethnic groups, large gaps remain between white students and students of color, with 69 percent of white test takers in the 2014-15 adjusted cohort reaching the college ready benchmark, compared with 13.8 percent of Hispanic/Latino students and 8.1 percent of Black/African-American students.

Low percentages of English learners, economically disadvantaged students, and students with disabilities met the college readiness benchmark across three cohorts

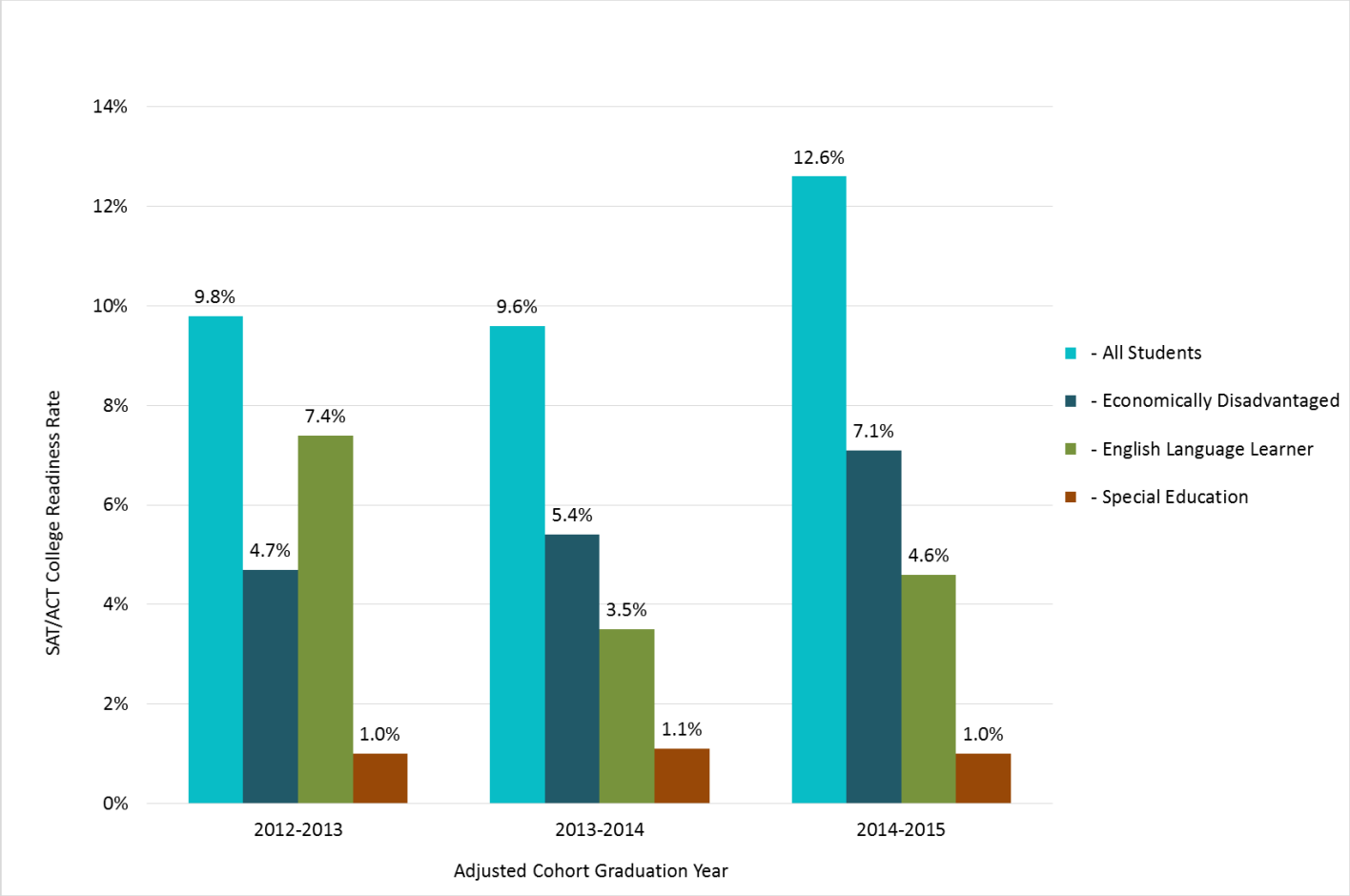

Figure H. Percentage of Students Meeting SAT and ACT College Readiness Benchmarks by Specific Groups of Students Across Three Cohorts

Figure H shows the percentages of SAT and ACT test-takers across three cohorts in several specific groups of students: economically disadvantaged students, English learners, and students with disabilities. While SAT/ACT performance has improved for economically disadvantaged students, EL students and students with disabilities have not seen the same upward trend in performance over the three cohorts presented here.

Key Finding Three. College enrollment rates have decreased for the adjusted cohort, even as the graduation rate has increased for the District of Columbia.

Approximately 37 percent of students from the adjusted cohort of 2012-13 and 35 percent from the adjust cohort of 2013-14 have enrolled in postsecondary education within 12 months of high school graduation.[10] It is important to note here that these figures include all students who were first-time

[10] College enrollment data include two- and four-year institutions participating in National Student Clearinghouse.

ninth grade enrollees in the given adjusted graduation cohort year. As stated in the introduction, the goal of this report is to answer the question, "How did a certain group of students perform during their time in high school and as they transitioned to postsecondary education?" on given college readiness and access measures.

Of first-time ninth grade students enrolled in District public schools, the percentage of students who enrolled in postsecondary education decreased between 2012-13 and 2013-14

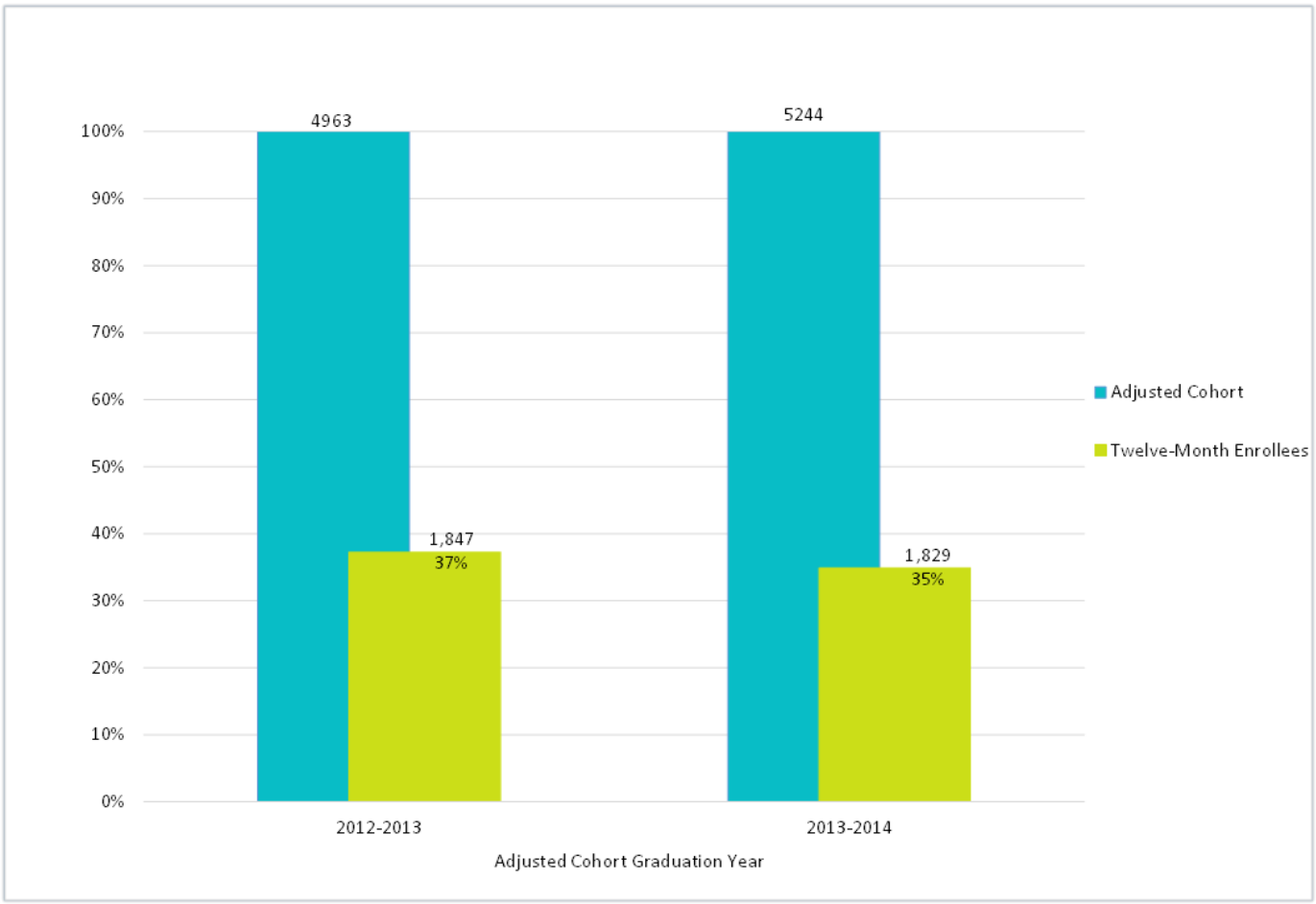

Figure I. Twelve-Month College Enrollment for Adjusted Graduation Cohorts

During the two adjusted cohorts displayed here, the four-year ACGR held relatively steady, at 61.5 percent for the 2012-13 adjusted cohort and 61.4 percent for the 2013-14 adjusted cohort, yet the college enrollment rate decreased two percentage points.

At the time of this report's publication, not enough time had passed to accurately report on the college enrollment rates of students in the 2014-15 or 2015-16 adjusted cohorts.

College Access and Readiness Initiatives

This report presents a number of findings related to SAT and ACT participation and the percentage of students meeting college readiness benchmarks, participation and performance on Advanced Placements exams, and college enrollment. The results shows that while there has been some improvement for District of Columbia students, much work still must be done. OSSE is planning two additional reports that will provide more information about ongoing programmatic efforts led by the Office of the State Superintendent of Education (OSSE) in partnership with local education agencies (LEAs), schools, and non-profit partners in the District of Columbia that aim to improve outcomes on the metrics presented here, as well as other key data points related to postsecondary, access, transition and completion. In addition, another report in this series will examine outcomes in the postsecondary space, including college persistence and Bachelors and Associates degree completion.

Three key initiatives to be explored in more detail in additional reports include:

- SAT School Day provides all public high schools the opportunity to administer the SAT to their grade 11 and 12 students free of charge. In 2015-16, 5,371 students in 36 high schools took the SAT. Also in 2015-16, OSSE developed the SAT Preparation Expansion Grant to support student test takers. In 2016-17, funding to five professional SAT preparation companies serves over 3,000 students at 23 public high schools across the city.

- OSSE provides financial support to schools and LEAs for low-income students taking Advanced Placement and International Baccalaureate exams. Support from OSSE defrays the cost of these exams for students receiving free and reduced-price meals.

- In summer 2015, OSSE developed the Summer Transitions series, a set of workshops and associated curricula that provides students with a crash course in enrolling in and navigating the first year of college, including accessing campus support services, understanding financial aid, establishing an academic foundation, and maintaining physical and mental well-being.

Appendix: Postsecondary Readiness and Access Series Part II: Business Rules

Metric Name & Definition	Calculation
SAT participation **The percentage of students in the adjusted cohort who took the SAT**	# of students in the adjusted cohort who ever took the SAT --- # of students in the adjusted cohort
ACT participation **The percentage of students in the adjusted cohort who took the ACT**	# of students in the adjusted cohort who ever took the ACT --- # of students in the adjusted cohort
SAT or ACT participation **The percentage of students who took either the SAT or ACT**	# of students in the adjusted cohort who ever took the ACT or SAT --- # of students in the adjusted cohort
SAT "college ready" benchmark **The percentage of students who scored at the "college ready" level on the SAT**	# of students in the adjusted cohort achieving SAT college ready benchmark (1550) --- # of students in the adjusted cohort
ACT "college ready" benchmark **The percentage of students who scored at the "college ready" level on one or more of the ACT subject areas (English, reading, mathematics, and science)**	# of students in the cohort achieving ACT college ready benchmark on one or more ACT subject area --- # of students in the adjusted cohort
SAT or ACT "college ready" benchmark **The percentage of students who scored at the "college ready" level on the SAT or ACT**	# of students the adjusted cohort achieving SAT or ACT college ready benchmark --- # of students in the adjusted cohort
Advanced Placement (AP) exam participation **The percentage of students who took at least one AP exam during high school**	# of students in the adjusted cohort who took at least one AP exam during high school --- # of students in the adjusted cohort
Advanced Placement (AP) passing score (3 or above) **The percentage of students who received a three or above on at least one AP exam**	# students in the adjusted cohort scoring 3 or above on and AP exam --- # of students in the adjusted cohort