

College Access and Success Among High School Graduates Taking the SAT[®]: African American Students

By Mary E. M. McKillip and Philip E. Mackey

TRENDS

Mary E. M. McKillip is an assistant research scientist at the College Board.

Philip E. Mackey is a senior researcher at REL Mid-Atlantic.

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Executive Summary

This report shows college enrollment and graduation trends among African American SAT® takers who finished high school in 2004 and 2010 by various student characteristics, including aspirations, self-perceived ability, and academic achievements. In every case, students in the top categories were the most likely to enroll in four-year colleges within one year after graduating from high school in 2004 and in 2010. Students in these top categories among the 2004 cohort were also more likely to graduate from a four-year college six years later. Also, African American females and students whose parents went to college tended to be more likely to enroll and graduate from college, although we did see increases in the proportion of males participating in the SAT as well as increases in examinees whose parents had a college degree. Additionally, we found an increase in SAT participation, Advanced Placement Program® (AP®) participation, two-year college enrollment, and an increase in SAT takers with high aspirations and self-perceived ability. These positive trends, combined with the finding that relationships between student characteristics and college enrollment in 2010 were often quite similar to the relationships seen in 2004, suggest that an increased number of African American students may graduate with college degrees in the coming years.

Introduction

This report documents the trends in college enrollment and four-year college degree attainment among African American SAT takers¹ from the high school graduating classes of 2004 and 2010. It is one in a series of four research reports examining high school student characteristics and college outcomes among students from African American, Asian American, Latino, and Native American backgrounds. This report may be used to consider characteristics of African American SAT takers in high school and how these characteristics are related to college access and success. However, it is descriptive in nature, so it cannot be used to draw conclusions about what *causes* positive college outcomes among African American students.

African American students are less likely to enroll in and persist in college than white students (Perna, 2000; Ross et al., 2012). However, we do not know enough about what characteristics among African American students are linked to college enrollment and success. These characteristics are important to consider for two reasons: (1) There may be differences in the characteristics that contribute to African American college success that are not apparent in studies of college success among all students, and (2) it is important to recognize the educational successes of students and not just highlight problems.

This report provides a revealing look at African American college enrollment in the high school graduating cohorts of 2004 and 2010 and six-year graduation rates of SAT takers in the cohort of 2004 who enrolled in a four-year college within one year of high school graduation. The National Student Clearinghouse (NSC) has recently provided the College Board with data showing postsecondary enrollment and graduation outcomes of SAT takers. NSC data are collected from more than 3,300 postsecondary institutions within the U.S., accounting for 96% of all U.S. college students. These data are combined with student demographic information and AP and SAT assessment data² to show within-group variations in college attendance and graduation of African American students, who attended both public and private high schools in the U.S.

By comparing characteristics of African American SAT takers graduating from high school in 2004 with those graduating from high school in 2010, this report also offers a glimpse at what the future may hold for recent high school graduates. The data show that students who exited high school in 2004 and 2010 with high aspirations, high self-perceptions of their abilities, and high achievements tended to be more likely to enroll in college. Students graduating from high school in 2004 with these characteristics also tended to be more successful in obtaining college degrees within six years. The fact that there was a sizeable increase in the number of African American students taking the SAT and that four-year enrollment trends have held steady among this group suggest that many more African American students may experience college success by 2016. At the same time, although this report does not focus on achievement gaps, problems remain that hinder the college prospects of many African American students.

1. African American students include students who selected “Black or African American” in response to the question “How do you describe yourself?” on the SAT Questionnaire. This question may exclude some multiracial students who identify as African American as well as another race, as students were required to choose only one race/ethnicity option.

2. Students taking a College Board assessment are assigned a unique identifier that can be linked across exams to study a student’s test-taking history throughout high school. These assessment data can also be connected to student demographic information collected during SAT registration.

College Attendance and Graduation

In 2004, 144,520 African American students took the SAT in the U.S. by the time they graduated from high school. An estimated 384,728 African American seniors graduated in 2004, which suggests that we are capturing information on approximately³ 38% of the population (Prescott & Bransberger, 2012). By 2005, 75% of these students had enrolled in college, with 21% first attending a two-year institution and 54% first attending a four-year institution. After 2005, an additional 7% enrolled in a two-year college, while 6% more enrolled in a four-year college. By 2010, almost half of the 2004 examinees who enrolled in a four-year college within one year of graduation had attained a bachelor's degree.⁴

Table 1.

College Attendance and Graduation Patterns of 2004 and 2010 SAT Takers, by Race/Ethnic Group

	Number of 2004 SAT Takers	First College Attended by 2005			Number of 2010 SAT Takers	First College Attended by 2011	
		2-Yr	4-Yr			2-Yr	4-Yr
			Graduated by 2010				
African American	144,520	21%	54%	49%	193,389	26%	54%
Asian American	105,716	20%	64%	69%	135,448	20%	65%
Latino	131,778	28%	47%	55%	217,520	32%	46%
Native American	8,423	24%	51%	54%	8,436	25%	54%
White	844,171	18%	65%	71%	836,294	20%	67%

In 2010, 193,389 African American graduating seniors had taken the SAT during high school — approximately 41% of African American graduating seniors and an increase of 3 percentage points compared to 2004. By 2011, 80% of these students had enrolled in college at some point, an increase of 5 percentage points compared to 2004, although the increase in college enrollment was only seen in African American students attending two-year colleges, while four-year college enrollment was stable. Table 1 puts these numbers into context.

Characteristics Related to College Enrollment and Graduation

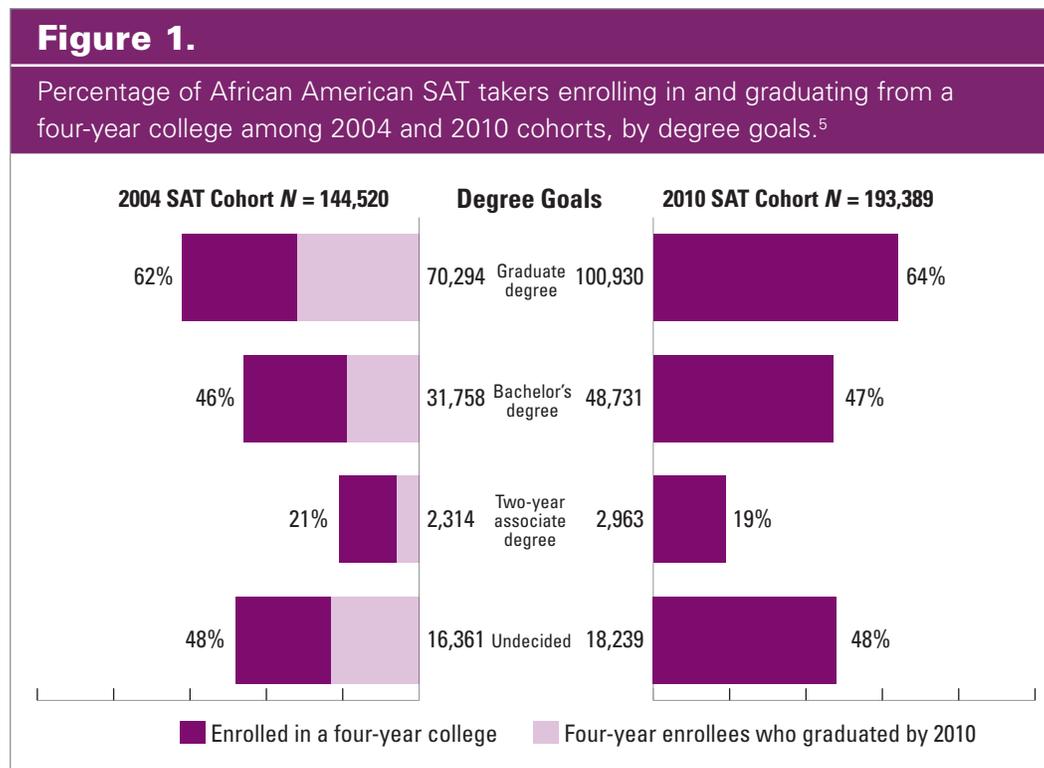
Aspirations and Self-Perceived Ability

On the SAT Questionnaire, students were asked, “What is the highest level of education you plan to complete beyond high school?” Figure 1 shows enrollment rates of African American SAT takers. Each bar in the figure shows the percentage of students who enrolled in a four-year college within the first year after high school among the 2004 and 2010 cohorts by degree goals. The lighter purple area of each bar for 2004 shows the proportion of enrolled students who went on to graduate with a bachelor's degree by 2010.

3. We include SAT examinees from both public and private U.S. schools, while the student population counts referenced here include public school graduates only; thus, these estimates can only be considered approximate.

4. Available NSC data do not provide an accurate count of two-year college graduates, so this report focuses on four-year college graduation outcomes.

This figure reveals several interesting trends. First, the most common goal among African American SAT takers in both 2004 ($N = 70,294$) and 2010 ($N = 100,930$) was a graduate degree. Students interested in a graduate degree were also the most likely to enroll in a four-year college within one year after high school (62% in 2004 and 64% in 2010). Second, the increase in SAT takers from 2004 and 2010 was mainly seen among students aspiring to four-year degrees or more, a group representing 71% of African American SAT takers in 2004 and increasing to 77% in 2010. Third, students who were undecided about their degree goals or interested in only a bachelor's degree were similarly likely to enroll in a four-year college after high school. Fourth, once enrolled, about half of the 2004 cohort who were undecided or interested in a graduate degree succeeded in completing a bachelor's degree, while 41% of students reporting an end goal of a bachelor's degree succeeded in that goal by 2010, and only 27% of students aspiring to an associate degree completed a bachelor's degree by 2010 instead.

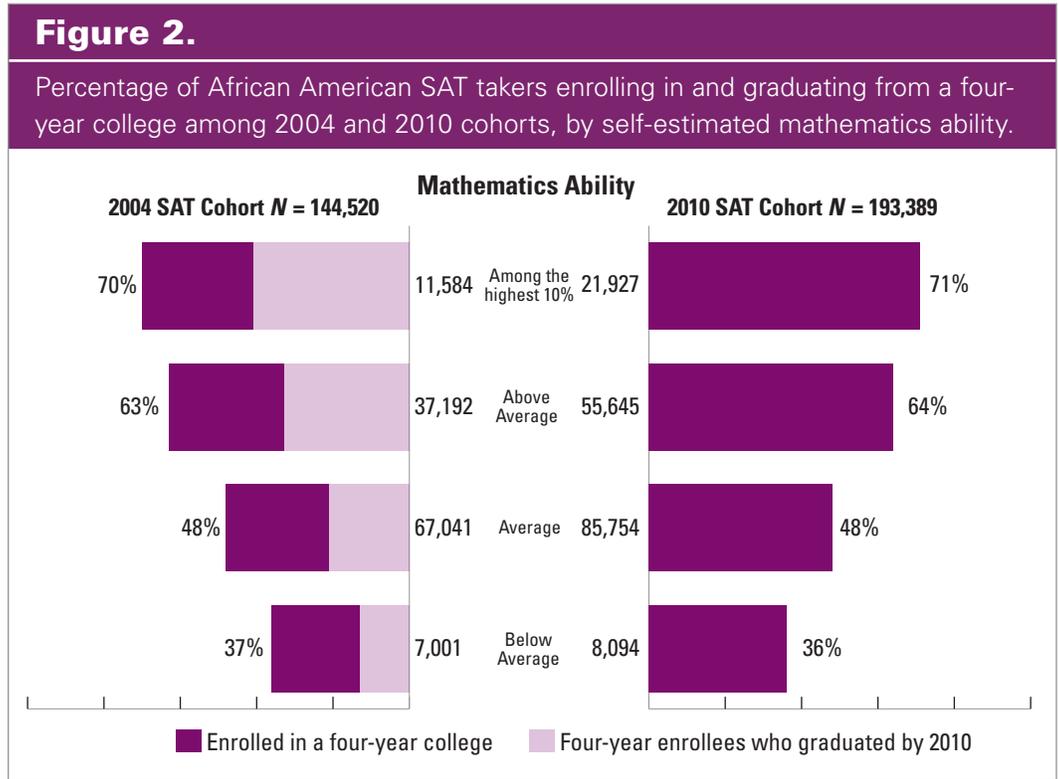


These trends suggest that aspirations to a goal are related to actually achieving that goal and also that it is not a problem for students to have some uncertainty about what their ultimate end goal may be. The trends also suggest that many African American SAT takers who enroll in four-year colleges aspire to go further and pursue graduate degrees.

SAT takers were also asked, "How do you think you compare with other people your own age in the following three areas of ability?" Figure 2 reports the responses for mathematics; the patterns for science and writing ability (not shown) were similar. Most African American SAT takers considered themselves average or above average in ability. The higher a student's self-reported ability, the more likely he or she was to enroll in a four-year college within a year after high school. Once enrolled, students reporting higher mathematics abilities in the 2004

5. College enrollment and graduation rates for students who did not complete a particular question on the SAT are excluded from the associated figure in this report; thus, the counts for each category in a figure will not sum to the total SAT count.

cohort were more likely to graduate with a bachelor’s degree by 2010 than those viewing themselves as less academically able. Additionally, there have been more increases in the top mathematics ability levels (above average and among the highest 10%) when comparing the 2004 cohort to the 2010 cohort, from representing 34% of the African American SAT takers in 2004 to 40% in 2010.



Academic Achievements

Beyond aspirations and perceptions of ability, we look at actual achievement on assessments and cumulative grade point averages (GPA). Figure 3 shows college enrollment and graduation by the number of AP Exams a student took, while Figure 4 displays college outcomes by the number of AP Exams on which a student scored a 3 or higher.⁶

6. AP Exams are scored on a scale of 1 to 5, with scores of 3 or higher signifying a student being considered qualified to receive college credit or advanced placement.

Figure 3.

Percentage of African American SAT takers enrolling in and graduating from a four-year college among 2004 and 2010 cohorts, by number of AP Exams taken.

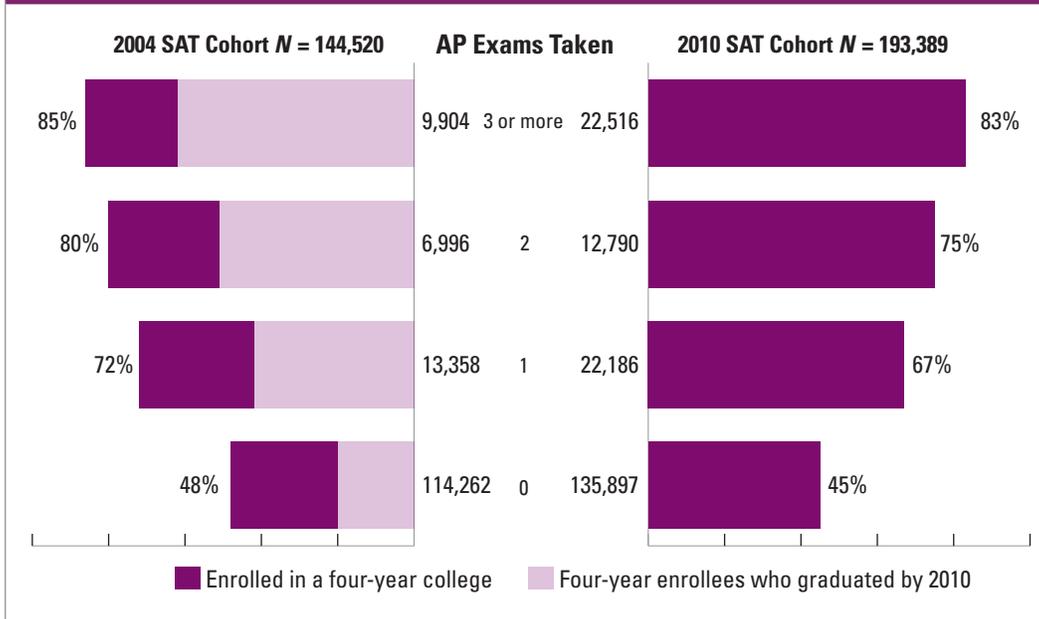
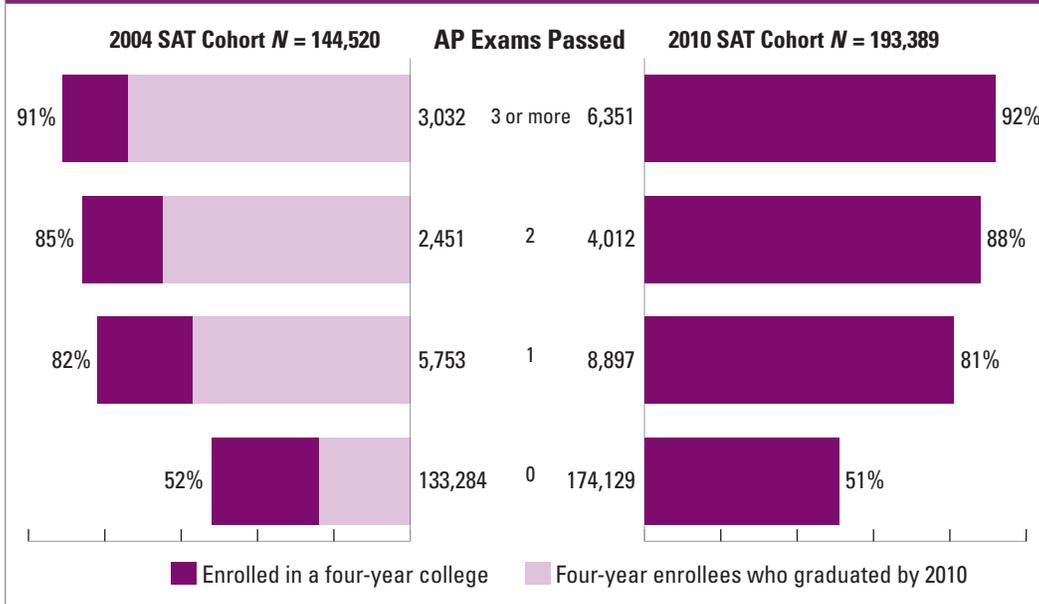


Figure 4.

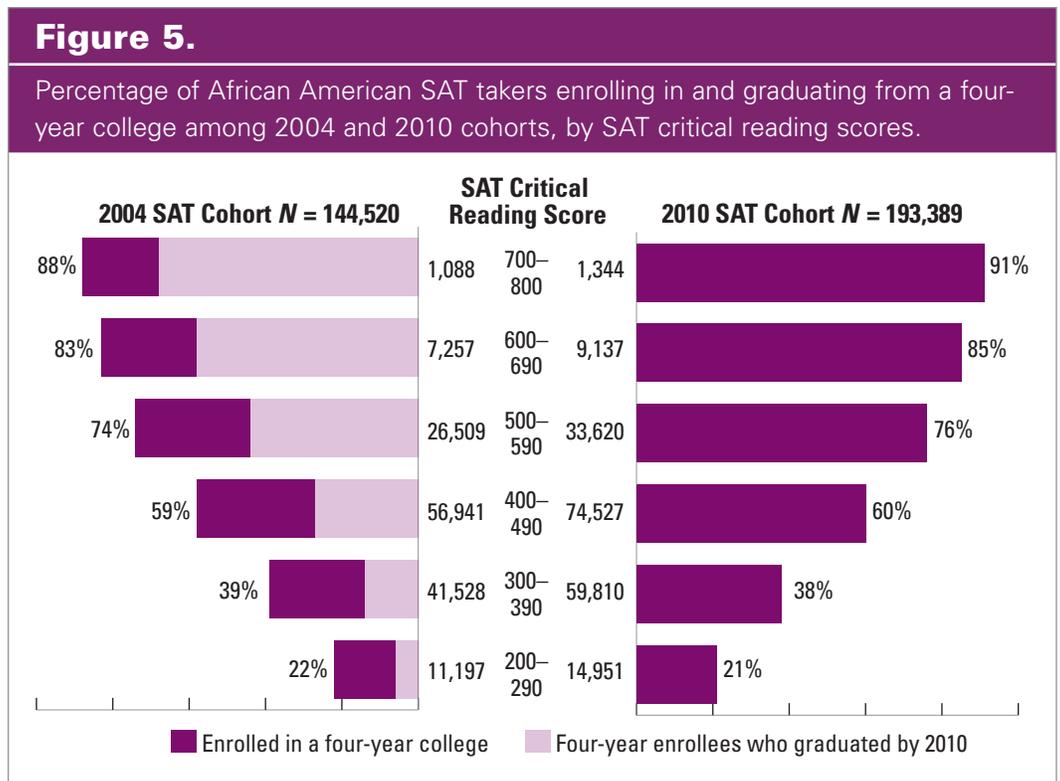
Percentage of African American SAT takers enrolling in and graduating from a four-year college among 2004 and 2010 cohorts, by number of AP Exams with scores of 3, 4, or 5.



These figures show that a considerable number of African American SAT takers never take an AP Exam.⁷ On the other hand, the proportion of African American SAT takers participating in AP Exams has increased from 21% in 2004 to 30% in 2010, while the proportion scoring a 3 or higher has increased from 8% to 10%.

Students who took more AP Exams and those who scored a 3 or higher on them were also more likely to enroll in four-year colleges. For example, 67% of African American SAT takers in the 2010 cohort who took one AP Exam enrolled in a four-year college by 2011, compared to 45% of students taking no AP Exams. In this same cohort, 81% of the students who scored a 3 or higher on one AP Exam enrolled in a four-year college by 2011, compared to 51% of students with no AP score of 3 or higher. Additionally, among the 2004 cohort, there is a relationship between a student’s AP Exam history and college graduation. Among students who enrolled in a four-year college within one year after high school graduation, the more AP Exams a student participated in and scored 3 or higher on, the more likely he or she was to graduate from college by 2010.

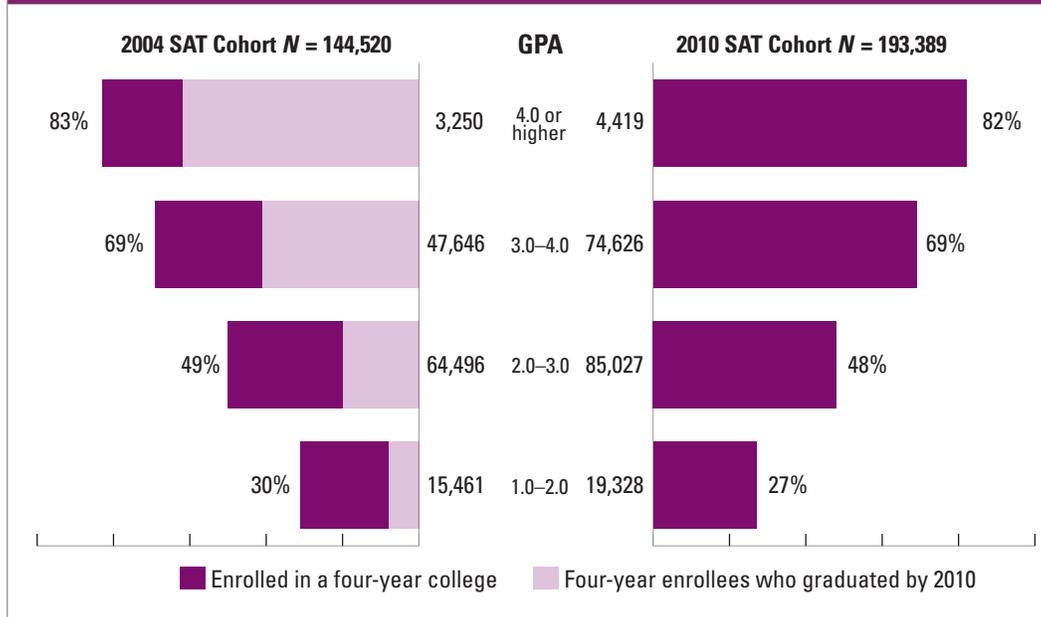
Figure 5 considers the relationship between SAT critical reading scores and college enrollment and graduation for African American students. SAT mathematics scores show very similar trends so are not presented here. Higher-scoring students are much more likely to enroll in a four-year college after high school than their lower-scoring peers. Also, among the 2004 cohort, higher-scoring students are much more likely than students with lower scores to graduate from college. The relationship between SAT scores and college enrollment appears stable because it is similar in 2004 and 2010, even with increases in African American SAT takers within every score band.



7. The number of African American SAT takers who were AP course participants is likely higher than the number of AP examinees, but the data used here do not provide a count of how many students took an AP course without taking its associated exam.

Figure 6.

Percentage of African American SAT takers enrolling in and graduating from a four-year college among 2004 and 2010 cohorts, by cumulative grade point average.

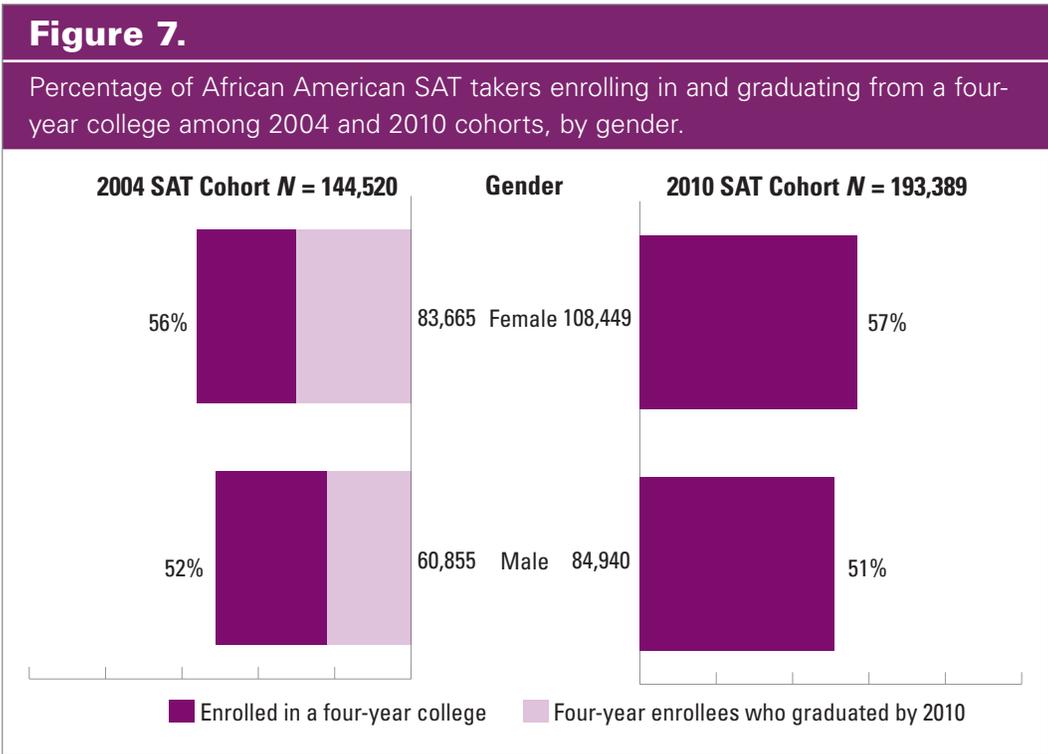


One last measure of academic achievement to consider is a student's grades for course work in high school. On the SAT Questionnaire students were instructed, "Indicate your cumulative grade point average for all academic subjects in high school." Their responses were reported on a scale of F (below 65) to A+ (97–100) and were then converted to a 4.0 scale. Trends here are similar to the other achievement measures: Students with higher GPAs are more likely to enroll in college, and these relationships appear stable over time. Students with higher GPAs who entered a four-year college by 2005 were also more likely to have graduated with a degree by 2010.

Gender, Parental Education, and Language Use

Among African American students, past research has noted within-group differences in college outcomes in terms of gender, and socioeconomic factors have been documented to have a strong relationship to educational achievement in general: Males and students from low-income families tend to underperform females and students from families with higher incomes (Aud et al., 2012; Cabrera & La Nasa, 2001).

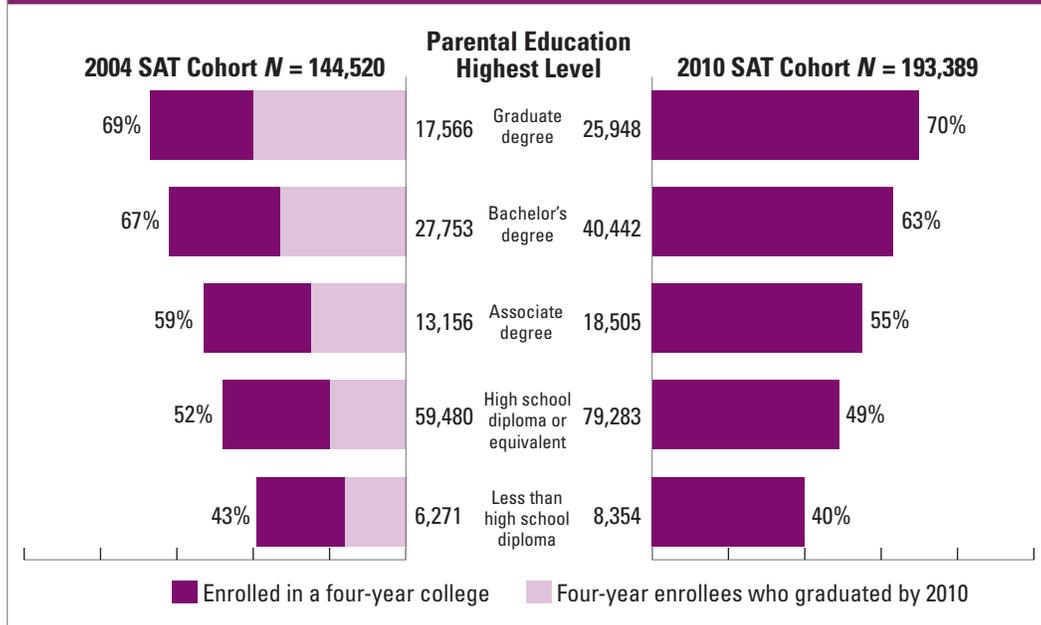
African American female SAT takers were somewhat more likely to enroll in a four-year college after high school compared with their male peers in 2004 and 2010. Among African American SAT takers who enrolled in college by 2005, 53% of females graduated from a four-year college by 2010 compared with 43% of males (the lighter purple bars in Figure 7). The proportion of African American males among SAT takers was 42% in 2004 and 44% in 2010, showing a slight increase.



In terms of socioeconomic status, students were instructed, “Indicate the highest level of education completed by your father (or male guardian) and your mother (or female guardian).” Mother’s and father’s education were combined, and the student was placed in the category pertaining to the parent with the highest degree. Figure 8 shows African American students’ college enrollment and success patterns by parental education. The higher a parent’s educational level, the more likely the student is to enroll in college and graduate from college after enrolling. African American SAT takers are often aiming to be the first in their families to attend college, as 41% of students in both 2004 and 2010 had parents with a high school degree but no college degree. However, the number of students with parents who have an associate degree or higher is growing, representing 40% of the SAT takers in 2004 to 44% in 2010. Thus, the number of students with a parent with a college degree in 2010 outnumbered the count of students whose parents who had only a high school degree.

Figure 8.

Percentage of African American SAT takers enrolling in and graduating from a four-year college among 2004 and 2010 cohorts, by parental education.

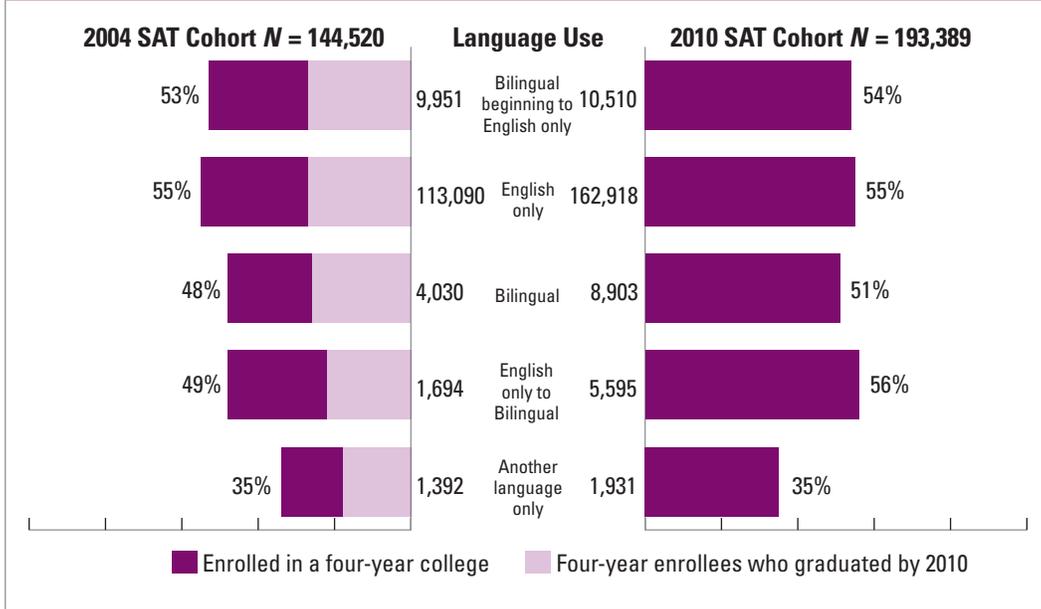


Language use is less researched, as recent immigrants compose a small proportion of the African American community, but it is of growing interest given the recent increase in dual-language or two-way immersion programs teaching students two languages while in school. As for language use, the SAT Questionnaire asks students, "What language did you learn to speak first?" and "What language do you know best?" On both questions, students can choose from the options: "English only," "English and another language," and "Another language." We combined these categories to place students into five groups: students who spoke another language as their first language (alone or with English) but consider themselves English dominant; students who report English only as both their first and best language; students who report speaking another language as their first language and consider themselves bilingual (knowing both English and another language "best"); students who spoke English as their first language but at the time of the SAT consider themselves bilingual; and students whose first and best language are a language other than English.

Figure 9 shows African American students' college enrollment and success patterns by language use. The vast majority of students are fluent in English only. However, there has been some growth in bilingualism among African American SAT takers, with 4% of the students reporting bilingualism in 2004 and 7.5% reporting it in 2010. There is also an interesting trend in the group of students who reported English as their first language but report bilingualism by the time of the SAT. While these students appear somewhat less likely to enroll in college in 2004 than the English only students, by 2010, their likelihood of college enrollment is 56% compared to 55% for the English-only group. Given the small group of bilingual students with English-only beginnings (who likely learned a second language while in school and speak English at home) and the descriptive nature of this report, we are unable to draw conclusions based on these results. However, the pattern is interesting and worthy of further research.

Figure 9.

Percentage of African American SAT takers enrolling in and graduating from a four-year college among 2004 and 2010 cohorts, by language use.



Conclusion

This report shows college enrollment and graduation trends among African American SAT takers who finished high school in 2004 and 2010 by student characteristics: aspirations, self-perceived ability, and academic achievements. In every case, students in the top categories (high aspirations, high perceived ability, high assessed ability) were the most likely to enroll in four-year colleges within one year after graduating from high school in 2004 and in 2010. Students in these top categories among the 2004 cohort were also more likely to graduate from a four-year college six years later. We found patterns seen in previous research: Females and students whose parents went to college tended to have more positive college outcomes, although we did see increases in the proportion of African American males participating in the SAT as well as an increase in examinees whose parents had a college degree.

Additionally, we found some positive trends among African American SAT takers when comparing 2004 to 2010: increases in SAT participation and AP participation as well as an increase in two-year college enrollment and an increase in the number of SAT takers with high aspirations and self-perceived ability. These positive trends, combined with the finding that relationships between student characteristics and college enrollment in 2010 were often quite similar to the relationships seen in 2004, suggest that an increased number of African American students may graduate with college degrees in the coming years.

The trends show descriptive relationships between a high school student's characteristics and later college outcomes but do not consider the interaction between one characteristic and another. These results show patterns but cannot be used to draw conclusions about what *causes* positive college outcomes among African American students. We also do not consider the many other factors that may contribute to college access and success, including high school and college characteristics. Upcoming research considers the interaction among student high school characteristics among SAT takers as well as college outcomes by race, and it examines which characteristics are better predictors of college success (McKillip & Li, 2013).

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