

# College Access and Success Among High School Graduates Taking the SAT<sup>®</sup>: Native American Students

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# TRENDS

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## Executive Summary

This report shows college enrollment and graduation trends among Native 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 (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: Female students and students whose parents went to college tended to have more positive college outcomes. Additionally, we found some positive trends among Native American SAT takers when comparing 2004 with 2010: increases in Advanced Placement Program® (AP®) participation and scores of 3 or higher, in four-year college enrollment, and in the number of students whose parents have college degrees. 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 Native 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 Native American SAT takers<sup>1</sup> 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 Native American SAT takers in high school and how these characteristics are related to college access and success, but it is descriptive in nature, so it cannot be used to draw conclusions about what *causes* positive college outcomes among Native American students.

Native American students are less likely to enroll and persist in college than white students (Ross et al., 2012). However, we do not know enough about what characteristics among Native 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 Native 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. Furthermore, there is a lack of research on trends among Native American students because of the difficulty in studying this smaller sized group.

This report provides a revealing look at Native 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.<sup>2</sup> These data are combined with student demographic information and AP<sup>®</sup> and SAT assessment data<sup>3</sup> to show within-group variations in college attendance and graduation of Native American students, who attended both public and private high schools in the U.S.

By comparing characteristics of Native 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 schools 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. At the same time, although this report does not focus on achievement gaps, problems remain that hinder the college prospects of many Native American students.

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

2. Four of the 33 U.S. tribal colleges participated in providing student information to NSC as of 2012, so we may underestimate Native American college enrollment, particularly two-year college enrollment.

3. 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, 8,423 Native American students took the SAT in the U.S. by the time they graduated from high school. An estimated 30,456 Native American seniors graduated in 2004, which suggests that we are capturing information on approximately<sup>4</sup> 28% of the population (Prescott & Bransberger, 2012). By 2005, 75% of these students had enrolled in college, with 24% first attending a two-year institution and 51% 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, 54% of the 2004 examinees who enrolled in a four-year college within one year of graduation had attained a bachelor's degree.<sup>5</sup>

In 2010, 8,436 Native American graduating seniors had taken the SAT during high school — approximately 26% of Native American graduating seniors and a drop of 2 percentage points compared to 2004. By 2011, 79% of these students had enrolled in college at some point — an increase of 4 percentage points compared to 2004, with two-year college enrollment up 1% and four-year college enrollment up 3%. Table 1 puts these numbers into context.

	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%

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

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

## Characteristics Related to College Enrollment and Graduation

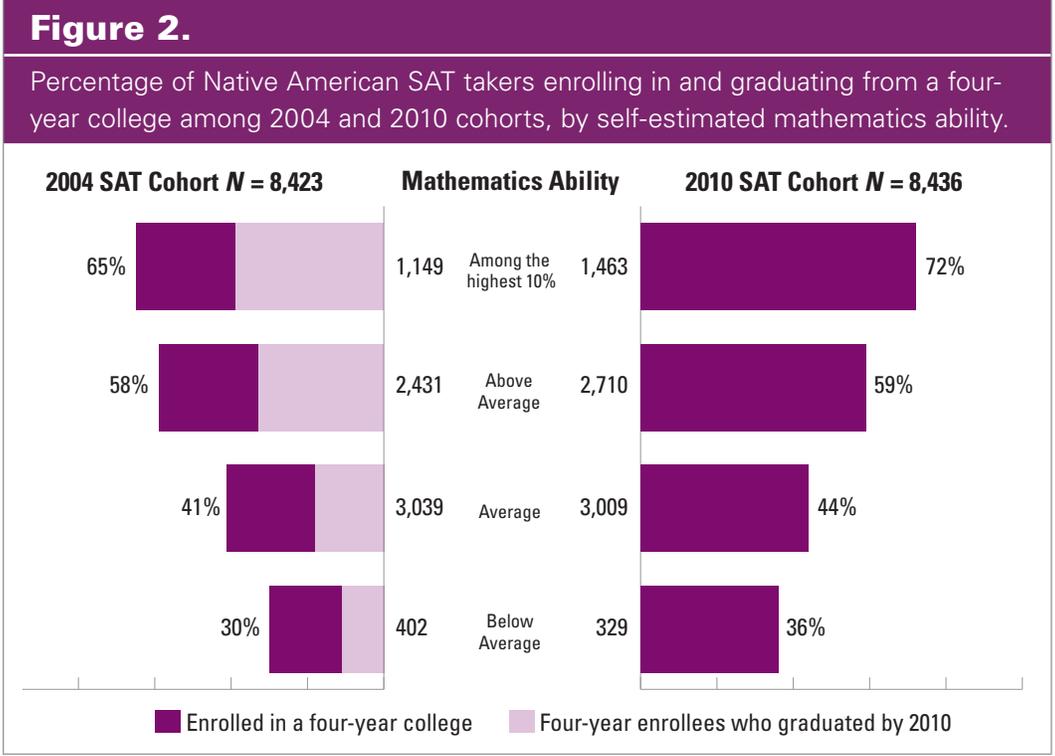
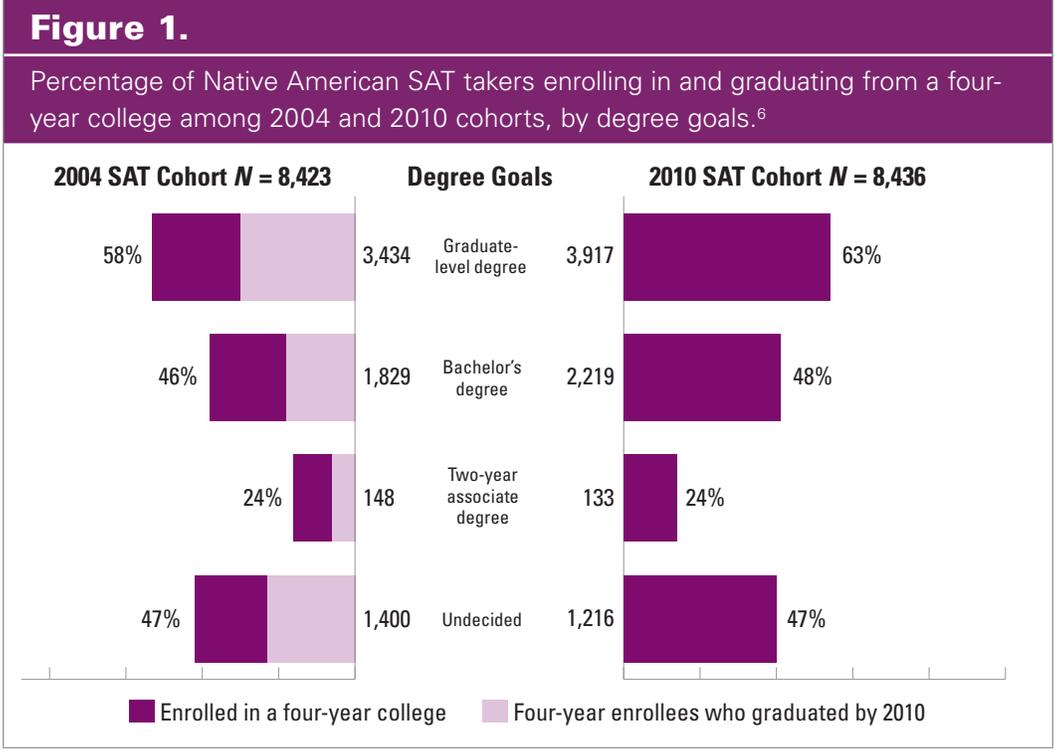
### Aspirations and Self-Perceived Ability

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 Native 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 bar of each for 2004 shows the proportion of enrolled students who went on to graduate with a bachelor’s degree by 2010.

This figure reveals several interesting trends. First, the most common goal among Native American SAT takers in both 2004 ( $N = 3,434$ ) and 2010 ( $N = 3,917$ ) 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 (58% in 2004 and 63% in 2010). Second, SAT takers in 2010 were more likely than those in 2004 to be aspiring to a four-year degree or higher, a change from 62% to 73%. 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, 53% of the 2004 cohort who were undecided and 55% of those interested in a graduate degree succeeded in completing a bachelor’s degree; 47% of students reporting an end goal of a bachelor’s degree succeeded in that goal by 2010; and 34% 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 Native American SAT takers who enroll in four-year colleges aspire to go further and pursue graduate degrees.

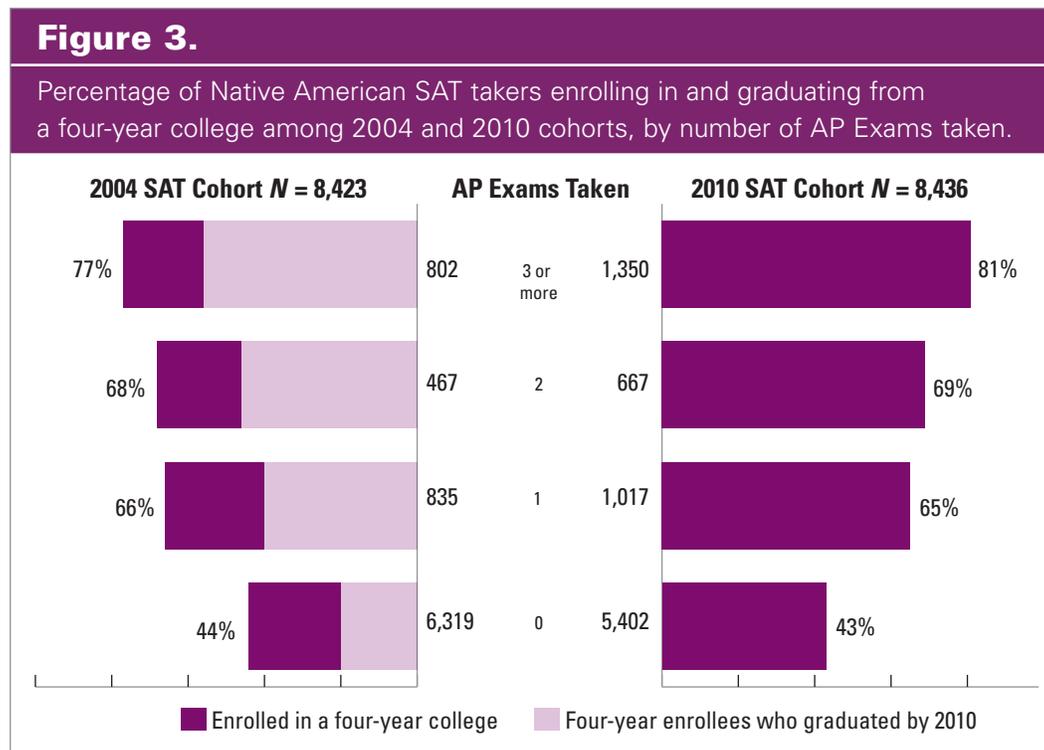
SAT takers were also asked, “How do you think you compare with other people your own age in the following three areas of ability?” Figure 2 reports the responses for mathematics; the patterns for science and writing ability (not shown) were similar. Most Native American SAT takers considered themselves 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 cohort were more likely to graduate with a bachelor’s degree by 2010 than those viewing themselves as less academically able. In addition, there have been more increases in these top self-reported mathematics ability levels (above average and among the highest 10%) when comparing the 2004 cohort to the 2010 cohort, from representing 43% of the Native American SAT takers in 2004 to around 50% in 2010.



6. College enrollment and graduation rates for students who did not complete the questions on the SAT are excluded from the related figure; thus, the counts for each category in a figure will not sum to the total SAT count. Some questions have more missing cases than others.

## 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.<sup>7</sup> These figures show that a considerable number of Native American SAT takers never take an AP Exam.<sup>8</sup> On the other hand, the proportion of Native American SAT takers participating in AP Exams has increased, from 25% in 2004 to 36% in 2010, while the proportion scoring a 3 or higher has increased from 14% to 21%. 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, 65% of Native American SAT takers in the 2010 cohort who took one AP Exam enrolled in a four-year college by 2011, compared with 43% of students taking no AP Exams. In this same cohort, 74% of the students who scored a 3 or higher on one AP Exam enrolled in a four-year college by 2011, compared with 47% of students with no AP Exam 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 students participated in and scored 3 or higher on, the more likely they were to graduate from college by 2010.



7. 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.

8. The number of Native American SAT takers who were AP course participants is likely higher than the count 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.

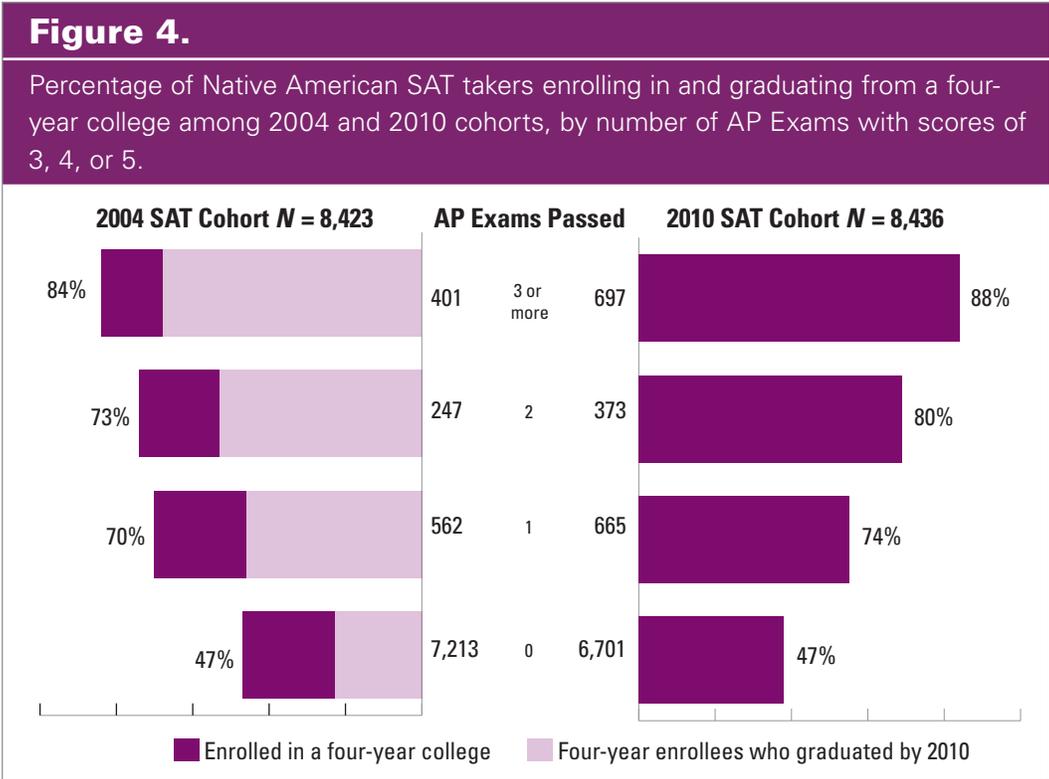
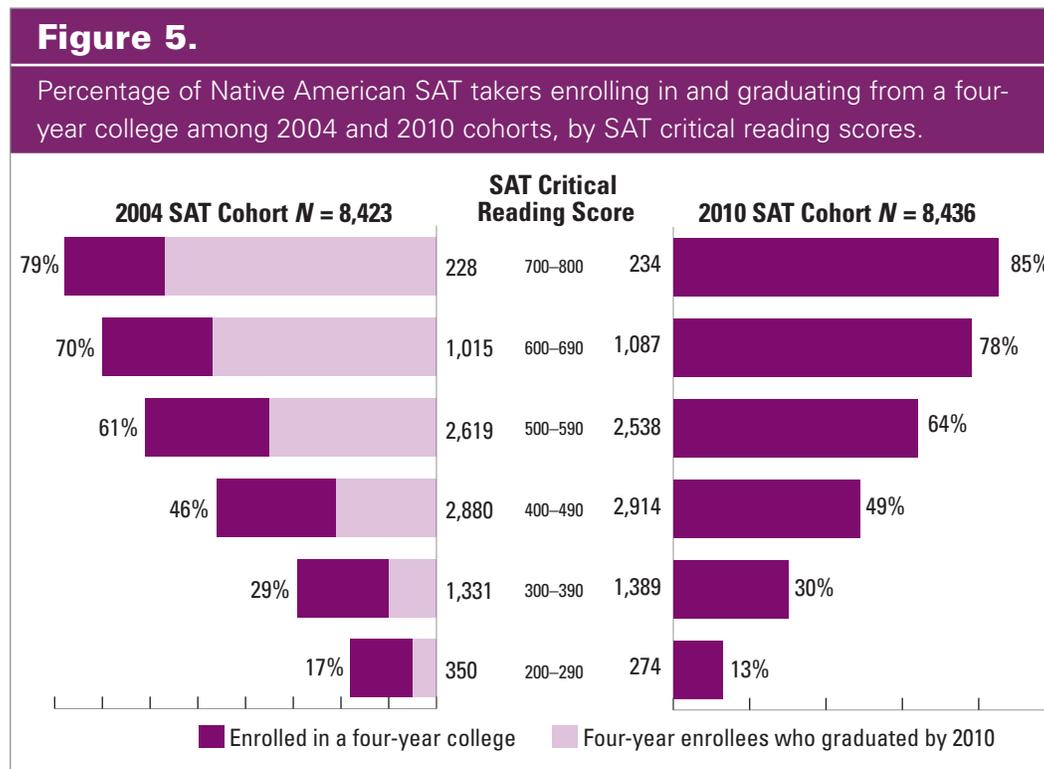
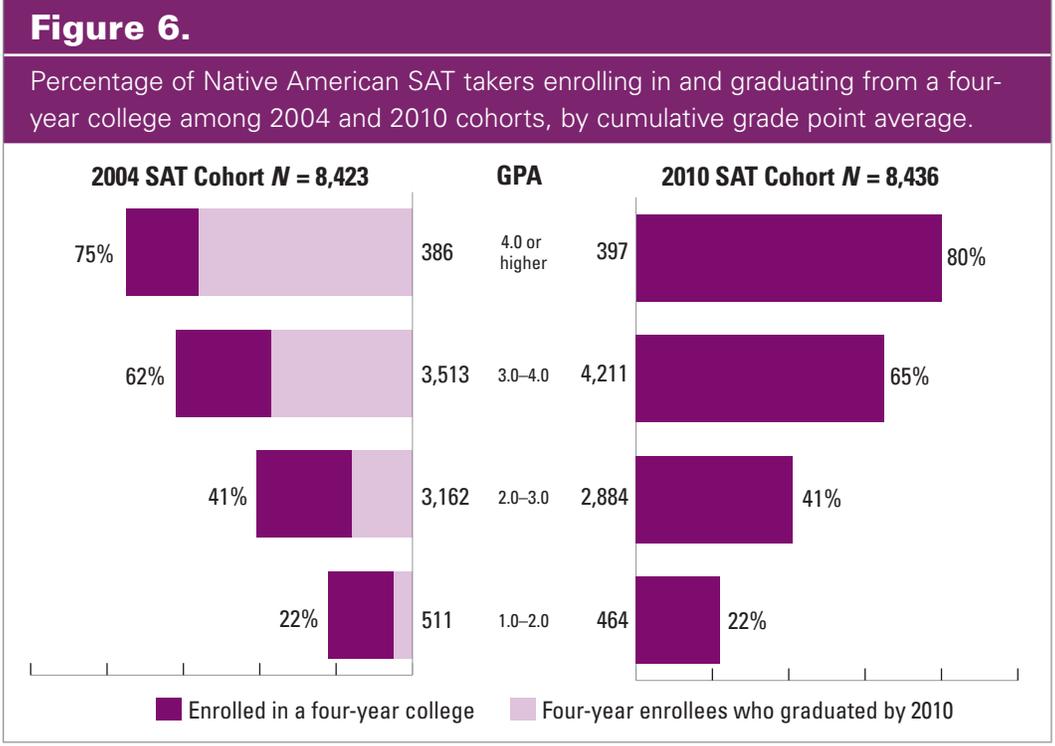


Figure 5 considers the relationship between SAT critical reading scores and college enrollment and graduation for Native American students. SAT mathematics scores show very similar trends, so they are not presented here. Higher scoring students are much more likely to enroll in a four-year college after 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.



One last measure of academic achievement to consider is a student's average grade 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 from F (below 65) to A+ (97–100) and were then converted to a 4.0 scale. Most students reported a GPA between 2.0 and 4.0, with more examinees in the higher 3.0–4.0 range in 2010 compared with 2004. 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.



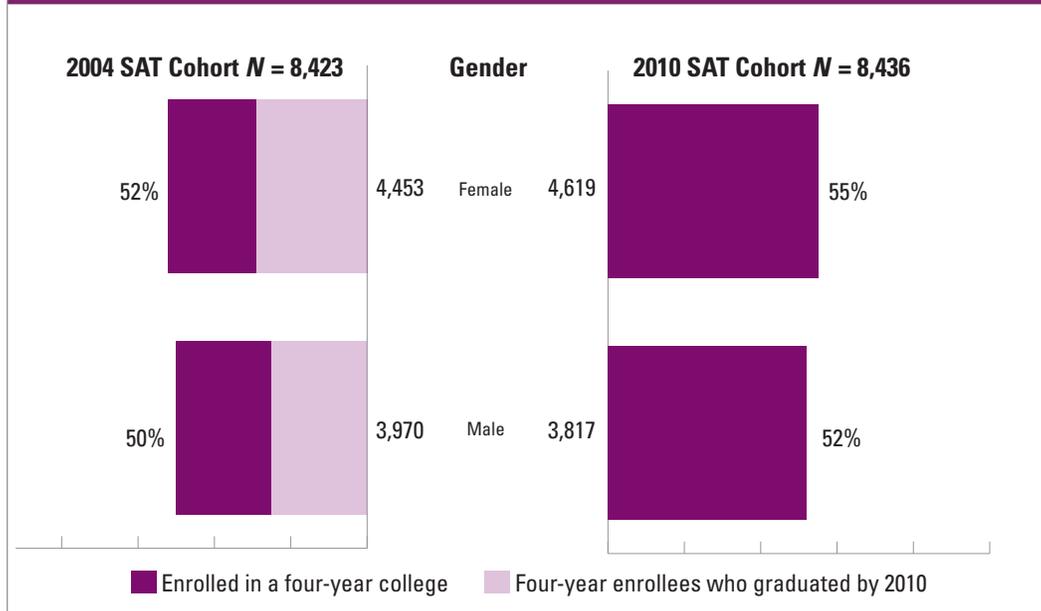
**Gender, Parental Education, and Language Use**

Among Native 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: Male students 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).

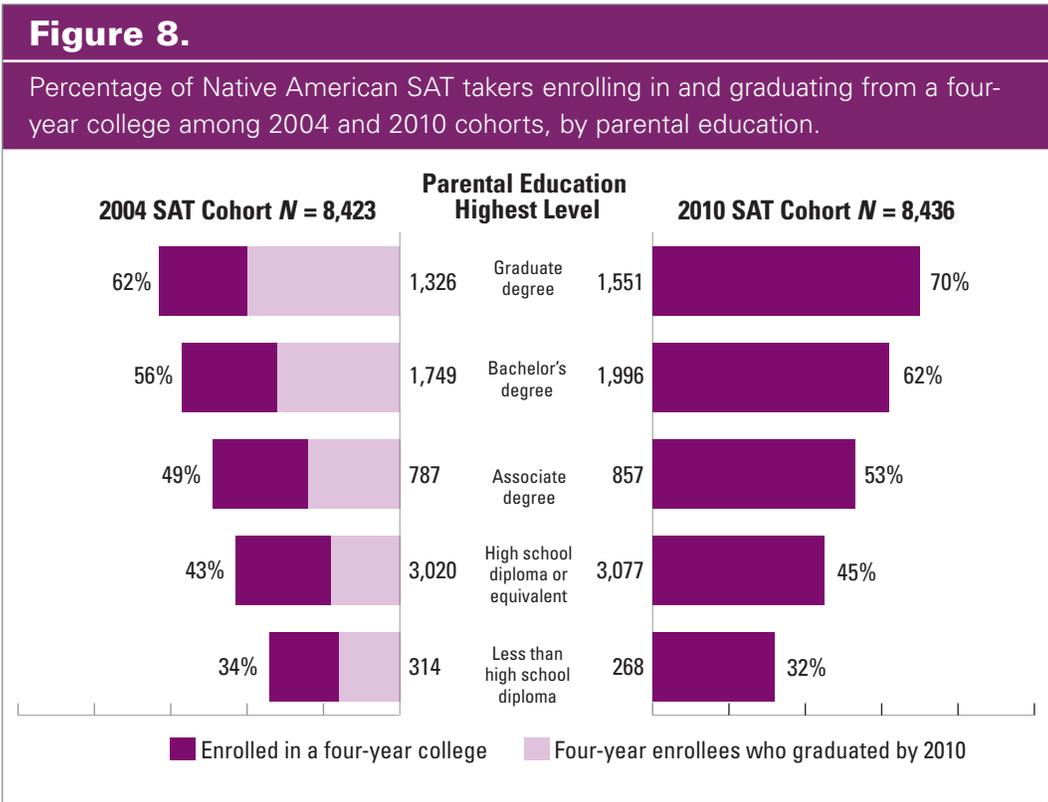
Native American female SAT takers were somewhat more likely to enroll in a four-year college after high school compared to their male peers in 2004 and 2010. Among Native American SAT takers who enrolled in college by 2005, 56% of females graduated from a four-year college by 2010 compared to 51% of males (the lighter purple bars in Figure 7). The proportion of Native American males among SAT takers was 47% in 2004 and 45% in 2010, showing a slight decrease.

**Figure 7.**

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

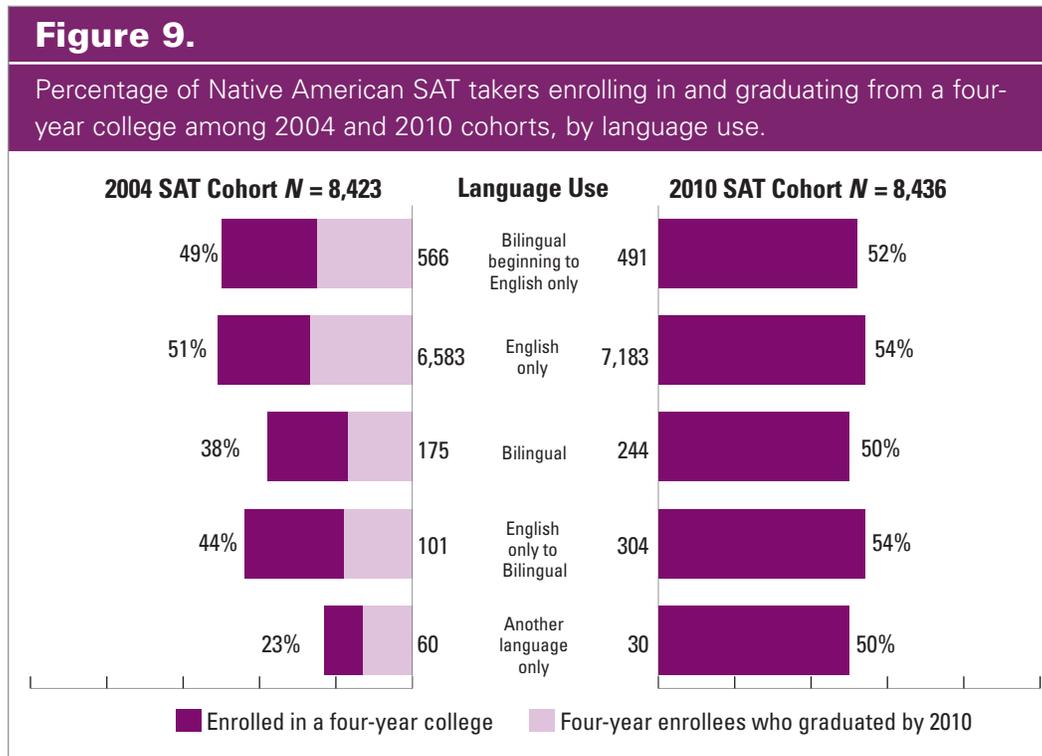


In terms of socioeconomic status, students were instructed, "Indicate the highest level of education completed by your father (or male guardian) and your mother (or female guardian)." Mother's and father's education were combined and the student was placed in the category pertaining to the parent with the highest degree. Figure 8 shows Native 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. Native American SAT takers are often aiming to be the first in their families to attend college, as 40% of students in 2004 and 2010 had parents with a high school degree or less. However, the number of students with parents who have an associate degree or higher is growing, representing 46% of the SAT takers in 2004 as compared to 52% in 2010.



Language use is important to Native American communities, although our results cannot distinguish the number of students speaking a Native language as opposed to other languages. Rather, 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 Native American students' college enrollment and success patterns by language use categories. The vast majority of students are fluent in English only, with few students reporting bilingualism. There was an increase in the small group of Native American students reporting bilingualism, however, from 3% of the SAT takers to 6.5%. There is not a clear pattern of college enrollment and graduation rates by language use for Native American SAT takers, as bilingual students appear somewhat less likely to enroll in college in the 2004 cohort compared with students who report English only as their best language, but these differences do not appear in enrollment rates among the 2010 cohort.



## Conclusion

This report shows college enrollment and graduation trends among Native 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: Female students and students whose parents went to college tended to have more positive college outcomes. In addition, we found some positive trends among Native American SAT takers when comparing 2004 to 2010: increases in AP participation and scores of 3 or higher, in four-year college enrollment, and in the number of students whose parents have college degrees. 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 Native 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 Native 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 between student high school characteristics among SAT takers and college outcomes by race and examines which characteristics are better predictors of college success (McKillip & Li, 2013).

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