

College Access and Success Among High School Graduates Taking the SAT[®]: Latino 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.

The authors are grateful to Jun Li for his assistance in compiling the data for this project.

About the College Board

The College Board is a mission-driven not-for-profit organization that connects students to college success and opportunity. Founded in 1900, the College Board was created to expand access to higher education. Today, the membership association is made up of over 6,000 of the world's leading educational institutions and is dedicated to promoting excellence and equity in education. Each year, the College Board helps more than seven million students prepare for a successful transition to college through programs and services in college readiness and college success — including the SAT[®] and the Advanced Placement Program[®]. The organization also serves the education community through research and advocacy on behalf of students, educators and schools. For further information, visit www.collegeboard.org.

© 2013 The College Board. College Board, Advanced Placement Program, AP, SAT and the acorn logo are registered trademarks of the College Board. PSAT/NMSQT is a registered trademark of the College Board and National Merit Scholarship Corporation. All other products and services may be trademarks of their respective owners. Printed in the United States of America.

For more information on College Board research and data, visit research.collegeboard.org.

TRENDS

Contents

Executive Summary	3
Introduction	4
College Attendance and Graduation	5
Characteristics Related to College Enrollment and Graduation	5
Aspirations and Self-Perceived Ability	5
Academic Achievements	7
Gender, Parental Education, and Language Use.....	10
Conclusions.....	14
References.....	15
Tables	
Table 1. College Attendance and Graduation Patterns of 2004 and 2010 SAT® Takers, by Race/Ethnic Group	5
Figures	
Figure 1. Percentage of Latino SAT takers enrolling in and graduating from a four-year college among 2004 and 2010 cohorts, by degree goals	6
Figure 2. Percentage of Latino SAT takers enrolling in and graduating from a four-year college among 2004 and 2010 cohorts, by self-estimated mathematics ability	7
Figure 3. Percentage of Latino SAT takers enrolling in and graduating from a four-year college among 2004 and 2010 cohorts, by number of AP® Exams taken.....	8

Figure 4. Percentage of Latino 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	8
Figure 5. Percentage of Latino SAT takers enrolling in and graduating from a four-year college among 2004 and 2010 cohorts, by SAT critical reading scores	9
Figure 6. Percentage of Latino SAT takers enrolling in and graduating from a four-year college among 2004 and 2010 cohorts, by cumulative grade point average	10
Figure 7. Percentage of Latino SAT takers enrolling in and graduating from a four-year college among 2004 and 2010 cohorts, by gender	11
Figure 8. Percentage of Latino SAT takers enrolling in and graduating from a four-year college among 2004 and 2010 cohorts, by parental education	12
Figure 9. Percentage of Latino SAT takers enrolling in and graduating from a four-year college among 2004 and 2010 cohorts, by language use.....	13

Executive Summary

This report shows college enrollment and graduation trends among Latino 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 have graduated from a four-year college six years later. We found patterns seen previously in research: Females and students whose parents went to college tended to have more positive college outcomes. Additionally, we found an increase in SAT participation, Advanced Placement Program® (AP®) participation, two-year college enrollment, and an increase in students 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 quite similar to the relationships seen in 2004, suggest that an increased number of Latino students may graduate with college degrees in the coming years. We also find an increased proportion of Latino SAT takers who report bilingualism, suggesting that we may see an increased number of college graduates who are bilingual in the coming years as well.

Introduction

This report documents the trends in college enrollment and four-year college degree attainment among Latino 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 Latino 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 Latino students.

Latino students are less likely to enroll and persist in college than white students (Ross et al., 2012; Perna, 2000). However, we do not know enough about what characteristics among Latino students are linked to college enrollment and success, and the quickly growing population of Latino students in the U.S. makes our understanding of these patterns particularly important. These characteristics are important to consider for two additional reasons: (1) There may be differences in the characteristics that contribute to Latino 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 Latino 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 Latino students, who attended both public and private high schools in the U.S.

By comparing characteristics of Latino 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 exiting high school in 2004 and 2010 who had higher aspirations, higher self-perception of their abilities, and higher 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 Latino students taking the SAT and that four-year enrollment trends have held steady among this group suggest that many more Latino students may experience college success by 2016. At the same time, although this report does not focus on achievement gaps, challenges remain that inhibit the college prospects of many Latino students.

1. Latino students include students who selected “Mexican or Mexican American,” “Puerto Rican,” or “Other Hispanic, Latino, or Latin American” in response to the question “How do you describe yourself?” on the SAT Questionnaire. This question may exclude some students who identify as Latino as well as another race/ethnic group, as students were required to mark only one option; it also combines students of heterogeneous ethnic backgrounds (Mexican, Colombian, Honduran, etc.) into one race/ethnic category.

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, 131,778 Latino students took the SAT in the U.S. by the time they graduated from high school. An estimated 380,736 Latino seniors graduated in 2004, which suggests that we are capturing information on approximately³ 35% of the population (Prescott & Bransberger, 2012). By 2005, 75% of these students had enrolled in college, with 28% first attending a two-year institution and 47% first attending a four-year institution. After 2005, an additional 7% enrolled in a two-year college, while 4% more enrolled in a four-year college. By 2010, 55% of the 2004 examinees who enrolled in a four-year college within one year of graduation had attained a bachelor’s degree.⁴

In 2010, 217,520 Latino graduating seniors took the SAT during high school, approximately 39% of Latino graduating seniors. This is an increase of about 4 percentage points in the Latino student population taking an SAT. By 2011, 78% of these students had enrolled in college at some point, an increase of 3 percentage points, although the increase in college enrollment was only seen in Latino students attending two-year colleges. Table 1 puts these numbers into context.

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%

Characteristics Related to College Enrollment and Graduation

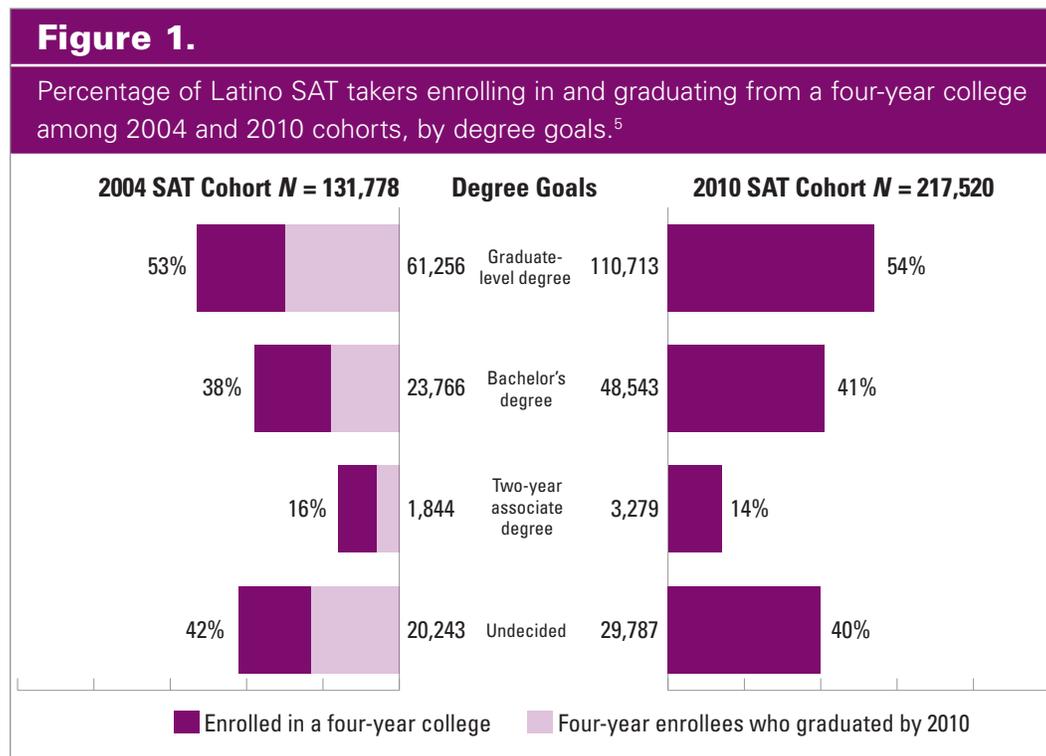
Aspirations and Self-Perceived Ability

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 Latino 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 section 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 takers from both public and private U.S. schools, while the overall student population counts include only public school graduates; 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.

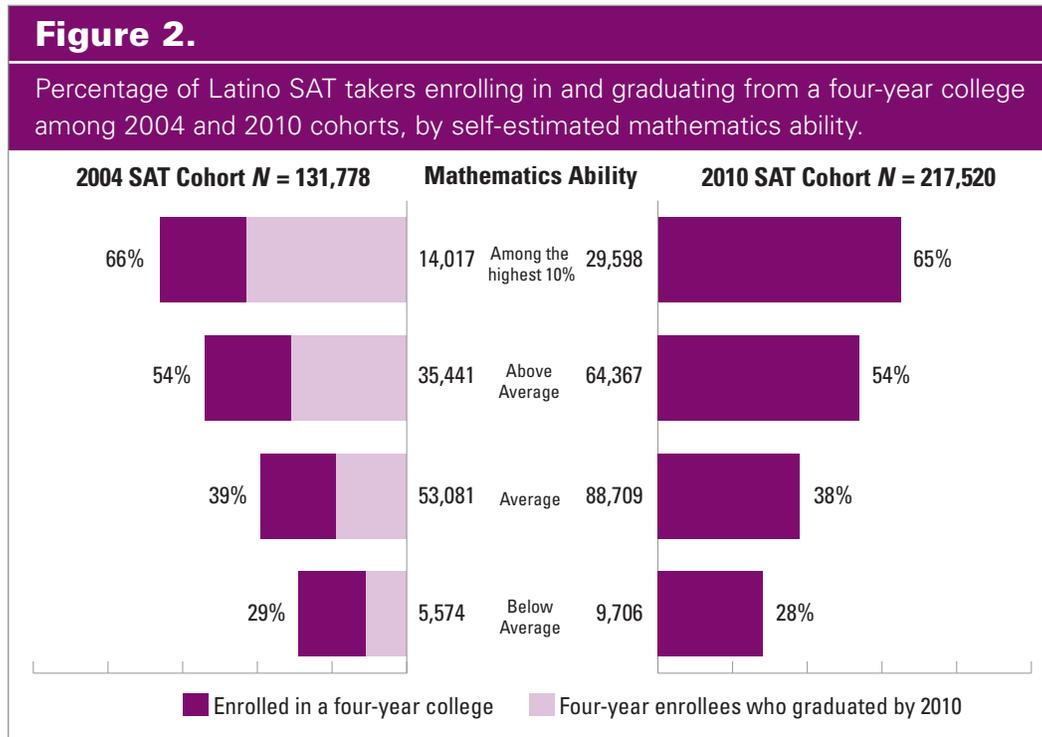
Figure 1 reveals several interesting trends. First, the most common goal among Latino SAT takers in both 2004 ($N = 61,256$) and 2010 ($N = 110,713$) was a graduate degree, and the proportion of Latino SAT takers aspiring to a bachelor’s degree or higher increased from 65% in 2004 to 73% in 2010. Second, students interested in a graduate degree were also the most likely to enroll in a four-year college within one year after high school (53% in 2004 and 54% in 2010). Third, students who were undecided about their degree goals or interested only in a bachelor’s degree were similarly likely to enroll in a four-year college after high school in 2004. Fourth, once enrolled, 56% of the 2004 cohort who were interested in a graduate degree and 55% who were undecided did succeed in completing their bachelor’s degree; 48% of students reporting an end goal of a bachelor’s degree succeeded in that goal by 2010; and only 35% of students interested in a two-year 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 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 Latino 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 Latino SAT takers consider 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. Additionally, there have been increases in these top mathematics ability

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.

levels (above average and among the highest 10%) when comparing the 2004 cohort with the 2010 cohort, from representing 38% of the Latino SAT takers in 2004 to 43% 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 These figures show that 47% of Latino SAT takers participated in AP Exams in 2010,⁷ up from 41% in 2004. A smaller proportion, 28%, scored a 3 or higher on any AP Exam in either year. Students who took more AP Exams and those who scored a 3 or higher on them were more likely to enroll in four-year colleges. For example, 47% of Latino students in the 2010 cohort who took one AP Exam enrolled in a four-year college within one year, compared with 33% among students who took no AP Exams; 55% of Latino students in the 2010 cohort who scored a 3 or higher on one AP Exam enrolled in college by 2011, compared with 38% among students who did not. 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 succeeded on, the more likely he or she was to graduate with a bachelor’s degree by 2010.

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

7. The number of Latino 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.

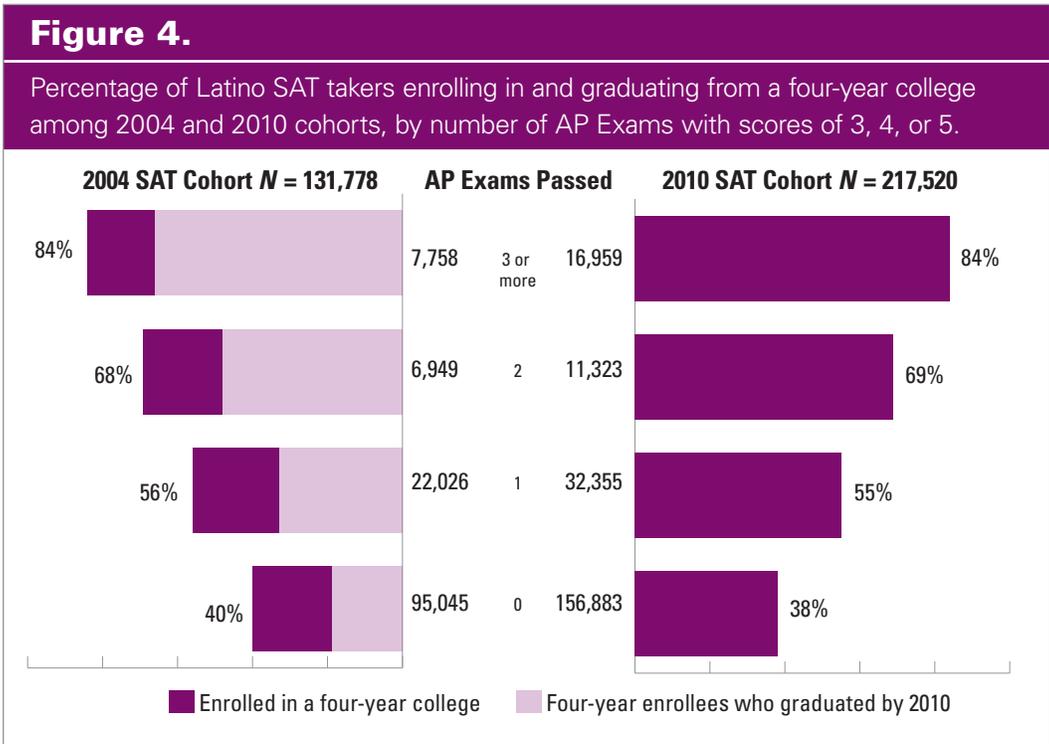
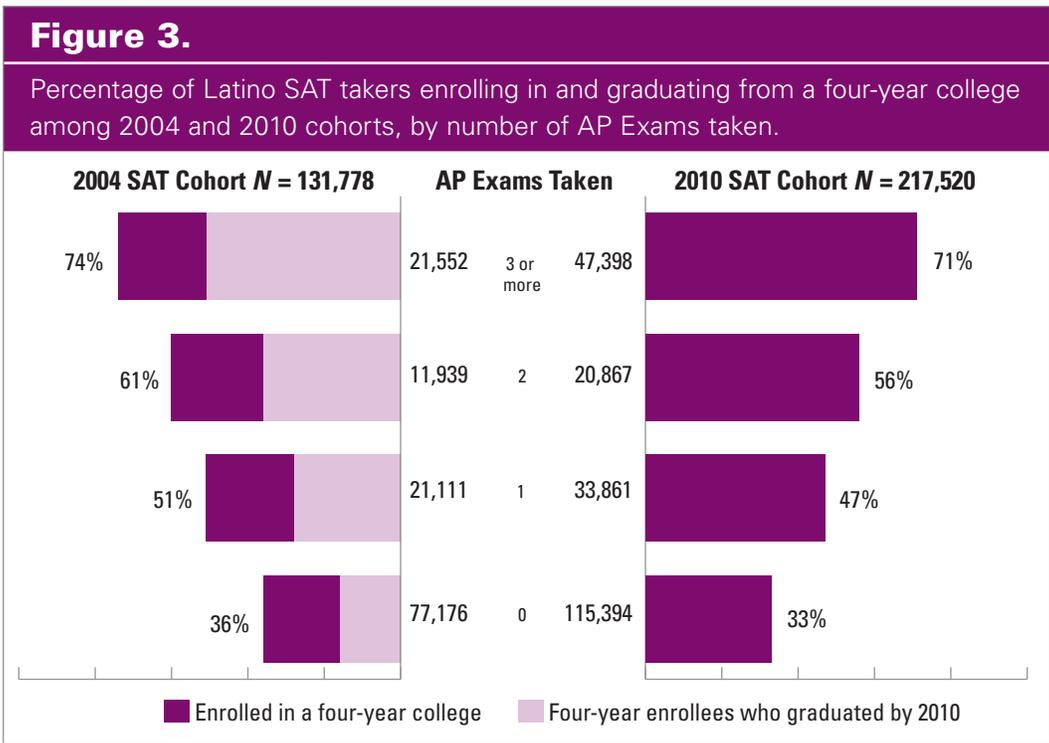
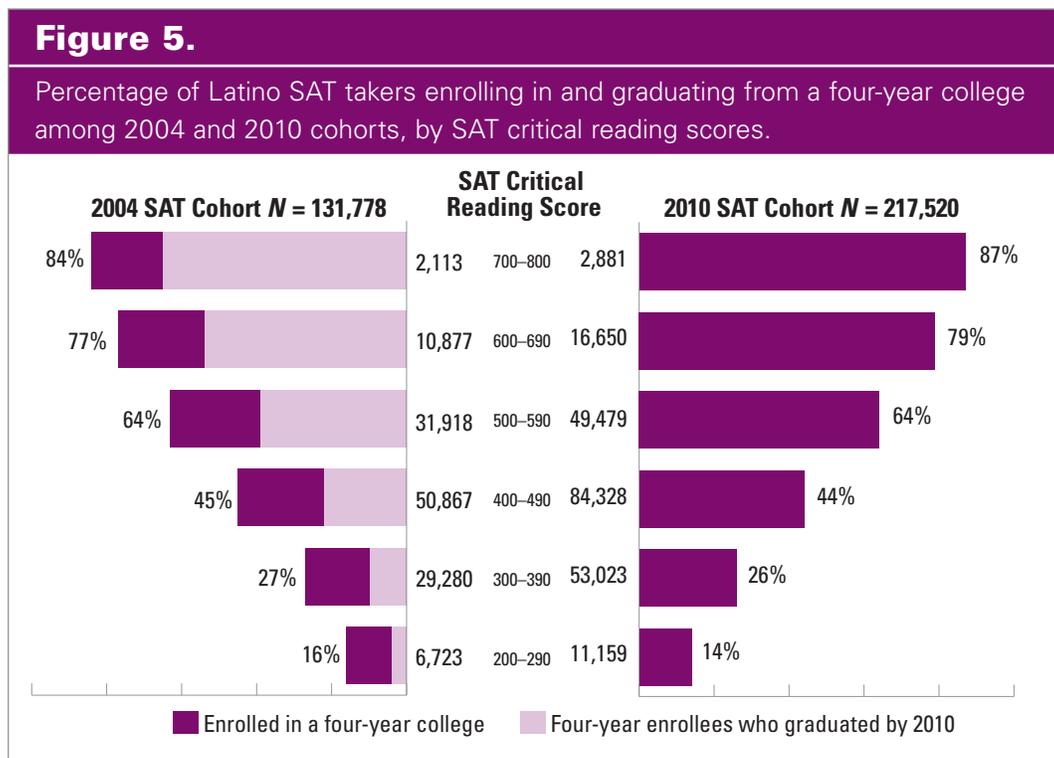
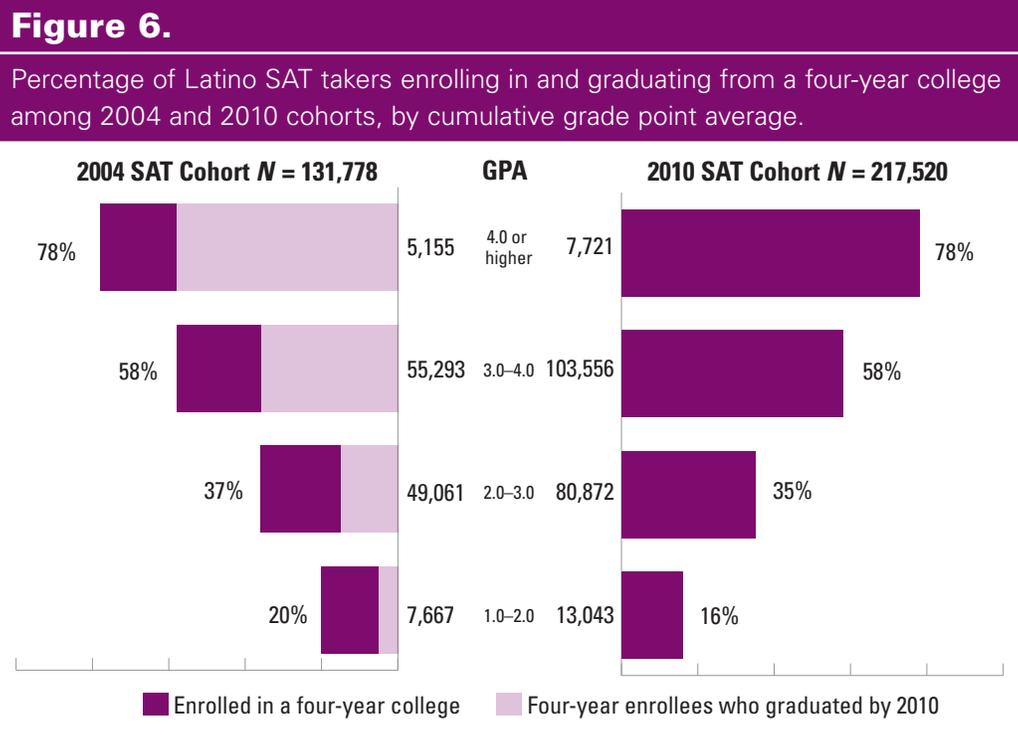


Figure 5 considers the relationship between SAT critical reading scores and college enrollment and graduation for Latino students. SAT mathematics scores show very similar trends so are not presented here. Higher-scoring students are much more likely to enroll in a four-year college after high school 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 Latino SAT takers within every score band.

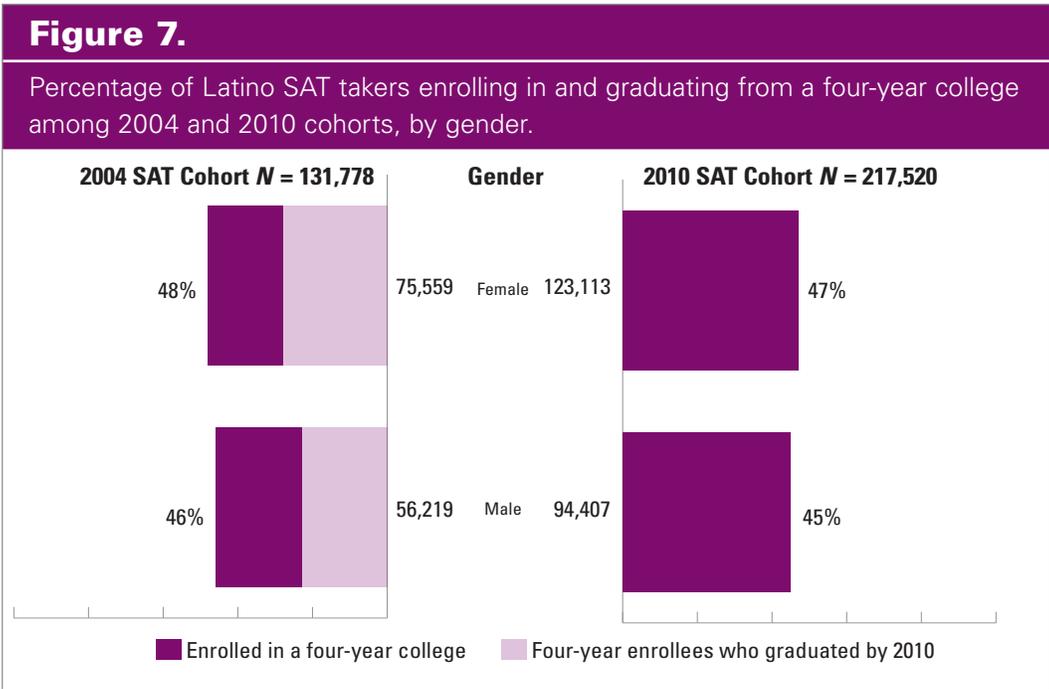
One last measure of academic achievement to consider is a student's grades for course work in high school. On the SAT Questionnaire, students were instructed, "Indicate your cumulative grade point average for all academic subjects in high school." Their responses were reported on a scale from F (below 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 in the 2004 and 2010 cohorts, 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

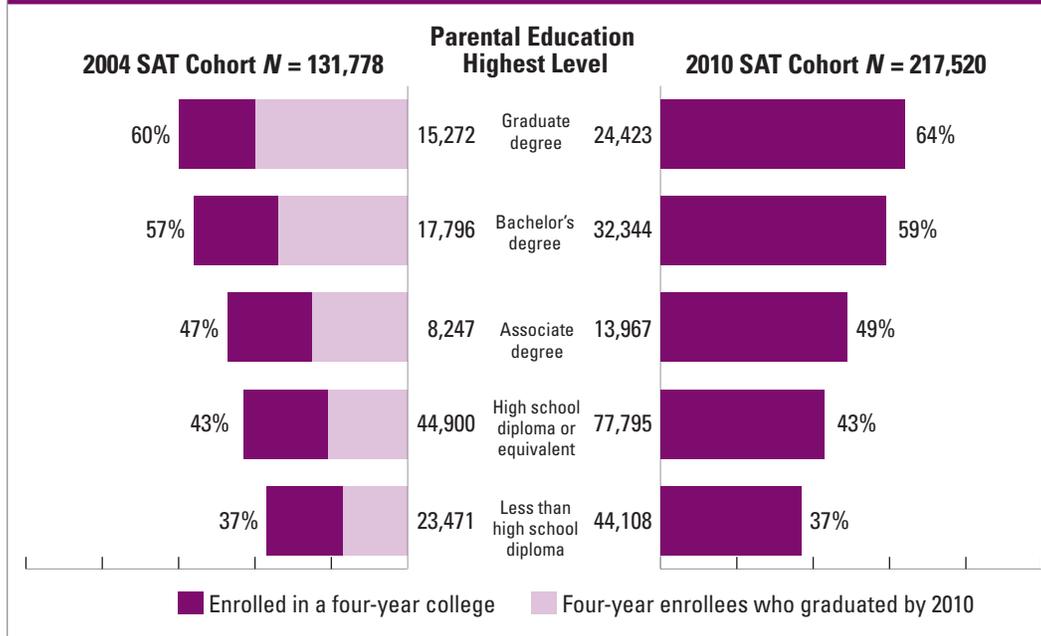
Among Latino students, past research has noted within-group differences in college outcomes in terms of gender, and socioeconomic factors have been documented to have a strong relationship to educational achievement in general: Males and students from low-income families tend to underperform when compared to females and students from families with higher incomes (Feliciano & Rumbaut, 2005; Cabrera & La Nasa, 2001). Among Latino SAT takers, females were more likely to take the SAT (57% of all Latino SAT takers in both 2004 and 2010) and were slightly more likely to enroll in a four-year college after high school compared with their male peers in 2004 and 2010 (see Figure 7). Among Latino SAT takers who enrolled in college by 2005, 59% of females graduated from a four-year college by 2010 compared with 50% of males (the lighter purple bars in Figure 7).



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 Latino students’ college enrollment and success patterns by parental education. Latino SAT takers are often aiming to be the first in their families to attend college, as 62% in 2004 and 63% in 2010 have parents with a high school degree or less. In general, the higher a parent’s educational level, the more likely the student is to enroll in college and graduate from college after enrolling.

Figure 8.

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



Immigrant status and language use among Latino students are important issues, as many Latino students are children of immigrants or immigrants themselves and speak Spanish in the home. We do not know if a student was born in the U.S. or when a student first entered the U.S., but the SAT Questionnaire does ask 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 with bilingual beginnings 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.

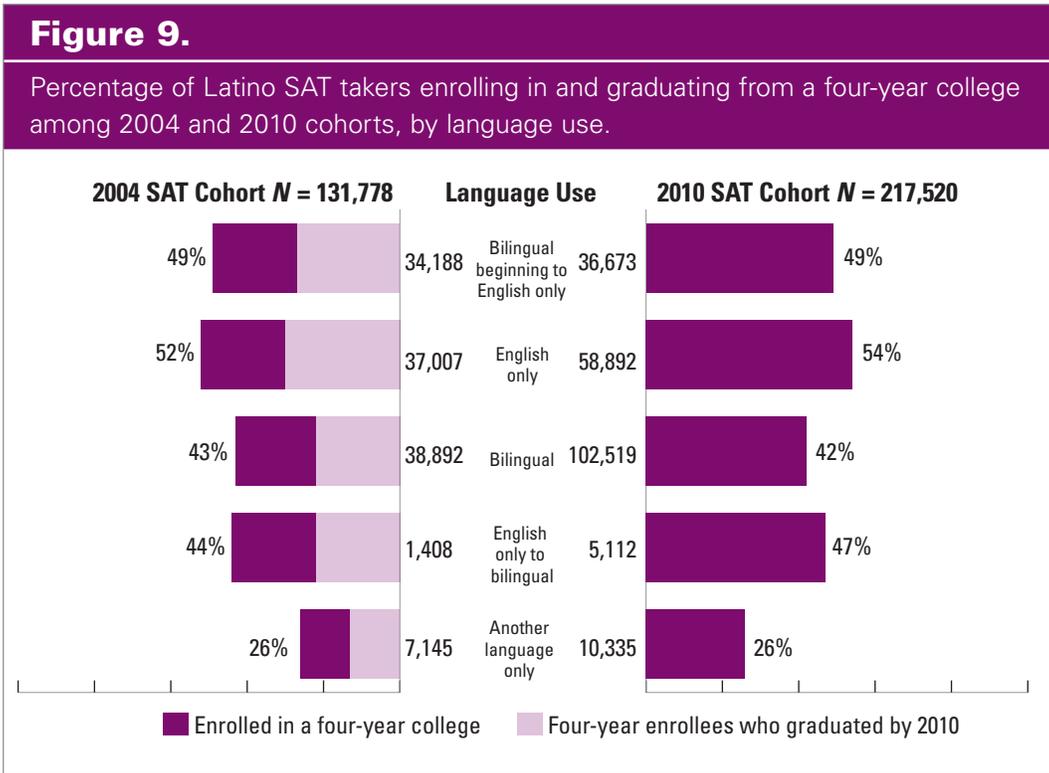


Figure 9 shows Latino students' college enrollment and success patterns by language use. The dominant categories are English only and Bilingual, with the bilingual group growing from representing 30% of total Latino SAT takers to 47% by 2010, while the English-only group was steady at about 28% of the group. Meanwhile, the proportion of Latino SAT takers with bilingual beginnings who cite English only as their best language dropped from 26% to 17%. Students who report English as their only best language are more likely than those reporting dominance in another language to enroll in a four-year college after high school and to graduate with a degree by 2010. However, we strongly caution against drawing conclusions from these patterns regarding which languages Latino students *should* speak and educational outcomes. The relationships seen here between bilingualism and lower college enrollment and persistence rates compared to English monolingual students are likely due to the strong correlations among other factors such as year of arrival in U.S., income, and parental education and both language use and college outcomes, none of which are explored here. (For more on this topic, see Portes & Rumbaut, 2006.) Prior research finds that bilingualism does not impede academic performance and offers some cognitive benefits (Bialystok, 2001).

Conclusions

This report shows college enrollment and graduation trends among Latino 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 previously in research: Females and students whose parents went to college tended to have more positive college outcomes. Additionally, we find some positive trends among Latino 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 a higher number of SAT takers among students 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 a higher number of Latino students may be graduating with college degrees in the coming years. We also find an increased proportion of Latino SAT takers who report bilingualism, suggesting that we may see an increased number of college graduates who are bilingual in the coming years as well.

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 Latino 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 than others (McKillip & Li, 2013).

References

- Bialystok, E. (2001). *Bilingualism in development: Language, literacy, and cognition*. New York: Cambridge University Press.
- Cabrera, A. F., & La Nasa, S. M. (2001). On the path to college: Three critical tasks facing America's disadvantaged. *Research in Higher Education, 42*(2), 119–149.
- Feliciano, C., & Rumbaut, R. (2005). Gendered paths: Educational and occupational expectations and outcomes among adult children of immigrants. *Ethnic and Racial Studies, 28*, 1087–1118.
- McKillip, M. E. M., & Li, J. (2013, April). *Is the whole equal to the sum of its parts? Race variations in a student's path from high school to college*. Paper presentation at the American Educational Research Association Annual Conference, San Francisco, CA.
- Perna, L. W. (2000). Racial/ethnic group differences in college enrollment decisions. In A. Cabrera & S. La Nasa (Eds.), *Understanding college choice among disadvantaged students* (pp. 65–83). New Directions for Institutional Research, Number 107. San Francisco: Jossey-Bass.
- Portes, A., & Rumbaut, R. G. (2006). *Immigrant America: A portrait*. Berkeley, CA: University of California Press.
- Prescott, B., & Bransberger, P. (2012). *Knocking at the college door: Projections of high school graduates* (8th edition). Boulder, CO: Western Interstate Commission for Higher Education.
- Ross, T., Kena, G., Rathbun, A., KewalRamani, A., Zhang, J., Kristapovich, P., & Manning, E. (2012). *Higher education: Gaps in access and persistence study* (NCES 2012-046). U.S. Department of Education, National Center for Education Statistics. Washington, DC: Government Printing Office.

The Research department actively supports the College Board's mission by:

- Providing data-based solutions to important educational problems and questions
- Applying scientific procedures and research to inform our work
- Designing and evaluating improvements to current assessments and developing new assessments as well as educational tools to ensure the highest technical standards
- Analyzing and resolving critical issues for all programs, including AP[®], SAT[®], PSAT/NMSQT[®]
- Publishing findings and presenting our work at key scientific and education conferences
- Generating new knowledge and forward-thinking ideas with a highly trained and credentialed staff

Admission	Measurement
Alignment	Research
Evaluation	Trends
Fairness	Validity

