

Diversity, Inequity, and Exclusion: How SATs and Other Standardized Tests Reduce Diversity in Higher Education

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Abstract

The purpose of this study was to examine the relationships between race, high school graduation, Scholastic Aptitude Test (SAT) scores, and four-year college-going rates. The setting included 89 school districts that were located in two adjacent suburban counties in New York State: Nassau and Suffolk. A Pearson Product-Moment correlation analysis, with a two-tailed test of significance with an alpha set at .05, was used to analyze the relationships among the variables. The results indicated that Black or African American and Hispanic or Latino student populations had statistically significant and negative correlations with four-year college-going rates, SAT scores, and high school Advanced Regents graduation rates. Conversely, Asian and White student populations had statistically significant and positive correlations with these variables. Based on these findings, the researchers made specific recommendations for school districts, state education departments, and institutions of higher education to reduce the racial inequities in college-going rates.

Purpose

The purpose of this study was to examine the relationships between race, high school graduation, Scholastic Aptitude Test (SAT) scores, and four-year college-going rates. The Education Trust-New York, an organization committed to racial equity and social justice, released a report which contained data indicating that many K-12 Black or African American as well as Latino or Hispanic students, attended schools where there were no teachers with the same racial or ethnic backgrounds. The report indicated that White students also encountered a lack of diversity among teachers, with almost half having attended schools with not a single Black or African American as well as Latino or Hispanic teacher (Education Trust-New York, 2017). These findings were further supported by Mangino and Levy (2019), who found the lack of diversity among teachers to be even more compelling in the Long Island region of New York State, which included schools from Nassau and Suffolk counties.

In an effort to explain a major contributing factor to this trend, Markson, Forman, and Earley (2020) argued that the teaching profession required a college degree for

employment and examined variables which might disproportionately prevent Black or African American and Latino or Hispanic students from attending a four-year college or university. Citing an earlier study by Markson, Forman, and Lindblom (2018) which found that poverty was the greatest obstacle to four-year college-going rates, Markson, Forman, and Earley (2020) examined the relationships between race, poverty, English language learners, and college-going rates. They found the following inequities: Students living in poverty and English language learners were divided along racial lines in manners that were reducing Black or African American as well as Latino or Hispanic student groups from attending college. This suppressed the minority teacher pool.

In addition to poverty, standardized tests in high school could be depressing Black or African American and Latino or Hispanic students from graduating and thus having opportunities to apply to a four-year college. In a multi-state study, Marchant and Paulson (2005) found that states which required standardized tests for high school graduation had higher dropout rates among students, particularly minority students. Carnevale et al. (2019) found that if SAT scores were the sole admission criteria for college admission, Black or African American as well as Latino or Hispanic college students would be reduced by 43 percent.

As a result of these ongoing issues, the purpose of this study was to examine the relationships between race, high school graduation rates, SAT scores, and four-year college-going rates.

Theoretical Framework

Race, High School Graduation, SAT scores, and Four-Year College-going Rates

The literature regarding race, high school graduation, achievement testing (SATs) and four-year college-going rate, identified significant issues regarding minority preparation for and success in attending four-year colleges. Zwick and Sklar (2005) found the effectiveness of the two most commonly studied academic measures, high school

grades and admissions test scores, predicted college success. The researchers' review of the findings on the validity of admissions tests among ethnic minority students confirmed that native language played a significant role for admission of English as a New Language for youngsters.

Marchant and Paulson (2005) noted that after controlling demographic characteristics (e.g., race, family education and income, GPA and class rank), a regression analyses revealed that states requiring graduation exams had lower graduation rates and lower SAT scores. Individually, students from states requiring a graduation exam performed more poorly on the SAT than did students from states not requiring an exam. The average combined verbal and math score on the SAT in states with exit exams was 34 points lower than the average scores in states without exit exams.

Walpole et al. (2005) reported Black or African American and Hispanic or Latino high school students struggled with the anxiety of taking the SAT along with their White and Asian American peers. However, Black or African American and Hispanic or Latino students historically and currently scored lower on standardized tests, including the SATs, than their peers. Walpole et al. (2005) also pointed out lower test scores were a persistent barrier to pursuing postsecondary education for Black or African American and Hispanic or Latino students, particularly those from low-income, urban areas. Finally, the researchers concluded Black or African American and Hispanic or Latino students continued to lag considerably behind Whites and Asian Americans in college enrollment, academic achievement, and degree attainment.

Due to criticism of the SAT as an accurate predictor of success in college, and because test results have been seen as a major obstacle to increasing racial diversity in higher education, in 2006 the College Board reported that Black or African American students' scores on the combined verbal and math portions of the SAT averaged 863, whereas White students' averaged scores of 1063. That's a 17% difference (A Large Black-White Scoring Gap Persists on the SAT, n.d.).

Zwick (2007) examined the validity of SATs for minority populations. The researcher found that national SAT results for 2007 showed that average scores for White students exceeded those for Black or African American students by roughly one hundred points on both the math and critical reading. At the same time, the rate of participation in U.S. higher education was strikingly low for Black or African American, Hispanic or Latino, and Native American. While these groups collectively constituted 35 percent of the public-school K-12 population in 2000, they received only 17 percent of the bachelor's degrees granted five years later. Zwick suggested the SATs served as pivotal gatekeepers, as a means of restricting access to college admission for minority applicants.

Mattern et al. (2011) examined high school grade point average and SAT performance as measured by the difference between a student's standardized SAT composite score and standardized grade point average. The

relationship between the SAT and grade point average discrepancy measure and the error term of three admission models (grades only, SAT score only, and grades and SAT scores) was examined. Results indicated that females, minorities, low socioeconomic status, and non-native English speakers were more likely to have higher grade point averages relative to their SAT scores.

Layton (2014) reported that Secretary of Education, Arne Duncan, noted that the high school graduation rate nationwide was 80% with up to one-third of students from low-income families not graduating. Black or African American students had a 69 percent graduation rate and Hispanic or Latino students had a 73 percent rate, while 86 percent of White students and 88 percent of Asian students earned high school diplomas. English-language learners and special-education students had below-average rates of 59 and 61 percent, respectively. This population included a sharply disproportionate share of Black or African American, Hispanic or Latino, Native American as well as special-needs students and English-language learners (Layton, 2014).

Shewach et al. (2017) reported differential college performance of racial/ethnic minority students with standardized tests and high school grades. This indicated the use of these factors in overpredicting minority student performance. Additionally, Shewach et al. (2017) found these studies typically involved native English-speaking students whereas a smaller body of literature on language proficiency suggested academic performance of those with more limited English language proficiency may be underpredicted by standardized tests, such as the SAT. The researchers investigated the joint role of race/ethnicity and language proficiency in Hispanic or Latino, Asian, and White ethnic groups across educational admissions systems (SAT, grade point average) in predicting freshman grades. Their results indicated that language may differentially affect academic outcomes for different racial/ethnic subgroups. The differential prediction of college grades of linguistic minorities within racial/ethnic minority subgroups appeared to be driven by the verbally loaded subtests of standardized tests but was largely unrelated to quantitative tests.

Carnevale et al. (2019) raised questions about the fairness of the college admissions system and the role of tests within it. The researchers examined what the effects would be if the selection process relied on a single variable, standardized test scores. They found that it would make the top 200 colleges less racially diverse. The share of White students would increase to 75 percent from 66 percent. The combined share of Black or African American and Hispanic or Latino students would fall to 11 percent from 19 percent. The share of Asian American students would fall to 10 percent from 11 percent. The researchers found that 60 percent of incoming freshmen at selective colleges were from the top quartile of family SES, but that would increase to 63 percent if students were admitted based on standardized test scores alone. Additionally, having more affluent students, selective colleges would become notably less racially diverse. The White enrollment would grow by about

14 percent. Meanwhile, the combined Black or African American and Hispanic or Latino enrollments would be reduced by 43 percent, and Asian enrollment would decline by about 9 percent. Therefore, having more affluent students, selective colleges would become notably less racially diverse (Carnevale et al., 2019).

Data Sources

The data were obtained from the New York State Education Department's (NYSED) data site (2022) and were collected from the school year ending in 2017. Data from a total of 89 school districts from New York State's Nassau and Suffolk counties were included in this study. Several districts were excluded from this study because they had fewer than 50 SAT test takers or they had no publicly available reporting of their students' SAT results. For the 2016 to 2017 school year, NYSED recorded student populations by school districts under the following racial groupings: American Indian or Alaska Native; Black or African American; Hispanic or Latino; Asian or Native Hawaiian or Other Pacific Islander; White; or Multiracial. For this study, race was reported as a percentage per school district. The population of students classified as Multiracial were excluded from this study. Furthermore, there were only six school districts among the 89 that had any percent reporting of American Indian or Alaska Native and these reporting percentages were too low for an appropriate sample size. As a result, this population was not included in this study. Regarding racial groupings, the researchers used the terminology as reported, as of 2021, by the New York State Education Department.

High school graduation rates were measured by the percent of students receiving a New York State High School Regents Diploma or Regents Diploma with Advanced Designation. The source of the data for SAT scores was obtained from Newsday website (Newsday Schools, n.d.) for the Nassau and Suffolk counties school years ending in 2017. The school districts' combined SAT scores of reading, writing, and mathematics were used in this study and averaged by school district.

Method

The researchers purposefully chose a pre-pandemic reporting year out of concern that data reporting during the pandemic would skew the data on students taking the SATs, college-going rates, as well as colleges or universities requiring the SATs. Additionally, the 2017 SAT score reporting by school district was the most recent publicly available data in the Nassau and Suffolk counties of New York State. The school year ending in 2017 was the last year that the New York State Education Department data website included student reporting on four-year college plans by school district. Finally, the cohort of 2017 SAT test takers would be finishing college by approximately 2022. The researchers noted the lack of diversity in the professions requiring a four-year college degree, such as the teaching profession, and explored if there was a possible end in sight to this trend emerging out of the 2022 year.

It should be noted that the Regents Diploma with Advanced Designation required the successful passing of almost twice the amount of Regents examinations that the regular Regents Diploma required. The researchers were interested in how graduating with each of these diplomas correlated with the four-year college-going rates of the students by school district. A Pearson Product-Moment correlation analysis, with a two-tailed test of significance with alpha set at .05 was used to analyze the relationships between the variables of race, high school graduation rates from the Regents Diploma, Regents Diplomat with Advanced Designation, SAT scores, and four-year college-going rates.

Results

Table 1 illustrated the relationships between race/ethnicity, SAT scores, graduation rates on the Regents Diploma with Advanced Designation, graduation rates on the Regents Diploma and four-year college plans.

Black or African American student populations had statistically significant and negative correlations with four-year college plans, SAT scores, and Advanced Regents graduation rates, accounting for 29.7, 49.14, and 41.34 percent of the variance respectively, $p < .05$. As Black or African American student populations increased by school district, four-year college-going rates, SAT scores, and high school graduation rates on the Advanced Regents decreased. However, Black or African American student populations had a statistically significant but positive correlation with the Regents Diploma, accounting for 32.83 percent of the variance, $p < .05$. As the Black or African American student populations increased, graduation rates with the Regents Diploma also increased by school district.

Similarly, Hispanic or Latino student populations had statistically significant and negative correlations with four-year college plans, SAT scores, and Advanced Regents graduation rates, accounting for 54.46, 62.57, and 70.39 percent of the variance respectively, $p < .05$. As Hispanic or Latino student populations increased by school district, four-year college-going rates, SAT scores, and high school graduation rates on the Advanced Regents decreased. However, Hispanic or Latino student populations had a statistically significant but positive correlation with the Regents Diploma, accounting for 54.76 percent of the variance, $p < .05$. As the Hispanic or Latino student populations increased, graduation rates with the Regents Diploma also increased by school district.

Conversely, the Asian student population had statistically significant and positive correlations with four-year college plans, SAT scores, and Advanced Regents graduation rates, accounting for 19.36, 23.33, and 19.89 percent of the variance respectively, $p < .05$. As Asian student populations increased by school district, four-year college plans, SAT scores, and high school graduation rates on the Advanced Regents also increased. However, Asian student populations had a statistically significant but negative correlation with the Regents

Table 1
Race/Ethnicity Correlations with Four-Year College Plans, SAT Scores, Advanced Regents and Regents Diploma Graduation Rates (N = 89)

		Four Year College	SAT Total Score	Advanced Regents Diploma	Regents	Black or African American	Hispanic or Latino	Asian
SAT Total Score	r	0.879**						
	r ²	77.26%						
	p	0.000						
	N	87						
Advanced Regents Diploma	r	0.872**	0.889**					
	r ²	76.04%	79.03%					
	p	0.000	0.000					
	N	87	89					
Regents	r	-0.844**	-0.816**	-0.929**				
	r ²	71.23%	66.59%	86.30%				
	p	0.000	0.000	0.000				
	N	87	89	89				
Black or African American	r	-0.545**	-0.701**	-0.643**	0.573**			
	r ²	29.70%	49.14%	41.34%	32.83%			
	p	0.000	0.000	0.000	0.000			
	N	87	89	89	89			
Hispanic or Latino	r	-0.738**	-0.791**	-0.839**	0.74**	0.581**		
	r ²	54.46%	62.57%	70.39%	54.76%	33.76%		
	p	0.000	0.000	0.000	0.000	0.000		
	N	87	89	89	89	89		
Asian	r	0.44**	0.483**	0.446**	-0.439**	-0.172	-0.32**	
	r ²	19.36%	23.33%	19.89%	19.27%	2.96%	10.24%	
	p	0.000	0.000	0.000	0.000	0.108	0.002	
	N	87	89	89	89	89	89	
White	r	0.596**	0.692**	0.715**	-0.616**	-0.804**	-0.85**	-0.075
	r ²	35.52%	47.89%	51.12%	37.95%	64.64%	72.25%	0.56%
	p	0.000	0.000	0.000	0.000	0.000	0.000	0.486
	N	87	89	89	89	89	89	89
** Correlation is significant at the 0.01 level (2-tailed).								

Diploma, accounting for 19.27 percent of the variance, $p < .05$. As the Asian student populations increased, graduation rates with the Regents Diploma decreased by school district.

Similarly, the White student population had statistically significant and positive correlations with four-year college plans, SAT scores, and Advanced Regents graduation rates, accounting for 35.52, 47.89, and 51.12 percent of the variance respectively, $p < .05$. As White student populations increased by school district, four-year college plans, SAT scores, and high school graduation rates on the Advanced Regents also increased. However, White student populations had a statistically significant but negative correlation with the Regents Diploma, accounting for 37.95 percent of the variance, $p < .05$. As the White student populations increased, graduation rates with the Regents Diploma decreased by school district.

SAT scores had statistically significant and positive correlations with four-year college plans, accounting for 77.26 percent of the variance, $p < .05$. As SAT scores went up by school district, the four-year college plans of its students also went up by 77.26 percent. Similarly, graduation rates from the Advanced Regents Diploma had statistically significant and positive correlations with four-year college plans, accounting for 76.04 percent of the variance, $p < .05$. However, graduation rates from the regular Regents Diploma had a negative correlation with four-year college plans, accounting for 71.23 percent of the variance. As graduation rates from the Regents Diploma increased, four-year college plans decreased by school district.

Conclusion

SAT scores had a strong and positive relationship with four-year college-going rates. Also, the Regents Diploma with Advanced Designation, the high school degree that required the maximum proficiency in standardized testing of Regents Examinations, had an almost identical strong positive relationship with four-year college plans among the graduates of school districts. However, graduation rates from the Regents Diploma, which only required approximately half of the amount of the Regents standardized testing, had an almost equally strong but negative relationship with four-year college plans among the graduates of school districts. Unfortunately, the Hispanic or Latino and Black or African American student population had a strong positive correlation with Regents Diploma which decreased their chances of going to a four-year college. Likewise, the Hispanic or Latino and Black or African American student populations had strong negative correlations with SAT scores, which also decreased the odds of these student populations of being accepted to a four-year college.

These trends were directly illustrated by the relationships between the Hispanic or Latino student populations of the school district and their students' four-year college-going rates. As this student population went up, four-year college-going rates went down by 54.46 percent. The

Regents Diploma with Advanced Designation graduation rates had a statistically significant and negative correlation with graduation from the regular Regents Diploma by school district, accounting for 86.3 percent of the variance, $p < .05$. This could be indicative of racial divisions among the student populations by school districts in this region.

Implications of the Research

The differences between the Advanced Regents Diploma and regular Regents are so compelling that they have near opposite impact on four-year college-going rates. If four-year colleges or universities are truly committed to promoting diversity, equity, and inclusion, they should reconsider the heavy emphasis they place upon Regents standardized testing and SAT scores for admission to colleges and universities. Given the results and findings throughout this study, the researchers make the following recommendations for school districts, state education departments and institutions of higher education.

First, school districts, as well as colleges, must increase efforts to diversify their teaching and administrative staffs. A compelling body of research has concluded that minority students suffer from a lack of exposure to educators who "look like them" and that Black and Latino students in particular succeed at higher rates when their classes are led by teachers of the same race or ethnicity. Yet, according to recent research by Hofstra University and other organizations, about 60 percent of the more than 600 public school buildings on Long Island -- a region where 50 percent of the students are non-white -- do not have a single black teacher. Nearly 50 percent of the buildings do not have one Latino at the head of a classroom. Therefore, the researchers recommend that school districts across Long Island amplify their recruiting mechanisms to hire more Black and Latino teachers (Mangino & Levy, 2019). It is also recommended that school districts adopt "Grow Your Own" programs to draw candidates from the school community which results in recruitment of teachers who are more likely to match the racial, ethnic, and economic characteristics of the students and will be more likely to stay in the district for a longer period of time.

The high school transcript should continue to be the primary focus of college application review, with or without standardized test scores. A sizeable number of colleges adopted this policy during the pandemic and many have not yet committed to making it permanent. We urge all colleges to eliminate or at least de-emphasize SAT and other standardized tests as an admissions criterion.

The researchers further recommend that school districts adopt advanced coursework to offer valuable opportunities to gain skills to thrive in post-secondary education. Findings in this study suggest that students who graduate with Advanced Regents are better prepared. Thus, creating a school culture of high expectations and achievement is essential to ensure access by minority students to rigorous curricula, programs and initiatives including

Advanced Placement and Honor classes, International Baccalaureate Diploma Programs, and NYS Seal of Biliteracy. Advanced and rigorous coursework must include the participation of English language learners as well as educators competent in culturally responsive teaching practices. Lack of proficiency in English should not be an impediment to developing content knowledge in different subjects.

Prior research by Markson, Forman, and Lindblom (2018) showed that poverty was the greatest obstacle to college-going rates in the same region where the current study took place. Furthermore, the Markson, Forman, and Earley (2020) findings showed that students living in poverty and English language learners were divided along racial lines in the same region of the current study. The racial inequities relating to SAT scores, Advanced Regents Diploma graduation rates, and college-going rates in the current study are most likely linked to poverty. A macro strategy of support and funding needs to be directed towards school districts with large minority student populations living in poverty so that these students may have greater opportunities and preparedness for college.

References

Carnevale, A. P., Strohl, J., Van Der Werf, M., Quinn, M. C., & Campbell, K. P. (2019). SAT-only admission: How would it change college campuses? *Georgetown University Center on Education and the Workforce*. <https://cew.georgetown.edu/cew-reports/satonly/>

Education Trust - New York. (2017). *One-third of all New York schools have no Latino or Black teachers, new report from Ed Trust-NY reveals*. The Education Trust - New York. <https://newyork.edtrust.org/press-release/one-third-new-york-schools-no-latino-black-teachers-new-report-ed-trust-ny-reveals/>

Forman, K., & Markson, C. (2018). What are the relationships between poverty, attendance, teacher evaluations, and high school graduation rates? In *Maximizing social science research through publicly accessible data sets* (pp. 229-246). IGI Global.

Layton, L. (2014, April 28). National high school graduation rates at historic high, but disparities still exist. *The Washington Post*. https://www.washingtonpost.com/local/education/high-school-graduation-rates-at-historic-high/2014/04/28/84eb0122-cee0-11e3-937f-d3026234b51c_story.html

Mangino, W., & Levy, L. & (2019). *Teacher diversity in Long Island's public schools*. The National Center for Suburban Studies at Hofstra University. <https://www.hofstra.edu/pdf/academics/css/teacher-diversity-li-public-schools.pdf>

Marchant, G. J., & Paulson, S. E. (2005). The relationship of high school graduation exams to graduation rates and SAT scores. *Education Policy Analysis Archives/Archivos Analíticos de Políticas Educativas*, 13, 1-15.

Markson, C., Forman, K. & Earley, T. (2020). The relationships between race, poverty, English language learners, and college-going rates. *New York Academy of Public Education*, 9(1), 1 - 7.

Markson, C., Forman, K. & Lindblom, K. (2018). Sending your students to college: School district climate variables that make a difference. *New York Academy of Public Education*, 7(1), 1 - 6.

Mattern, K. D., Shaw, E. J., & Kobrin, J. L. (2011). An alternative presentation of incremental validity: Discrepant SAT and HSGPA performance. *Educational and Psychological measurement*, 71(4), 638-662.

Newsday Schools. (n.d.). *SAT Scores for 2016-2017*. Newsday. <http://projects.newsday.com/schools/stats/satscores/2017>

New York State Education Department Data Site. (2022). *New York State Education at a Glance*. NYSED. <http://data.nysed.gov/>

NYSED Data Site. (n.d.). *Report Card Glossary*. NYSED. <https://data.nysed.gov/glossary.php?report=reportcards>

Shewach, O. R., Shen, W., Sackett, P. R., & Kuncel, N. R. (2017). Differential prediction in the use of the SAT and high school grades in predicting college performance: Joint effects of race and language. *Educational Measurement: Issues and Practice*, 36(3), 46-57.

The Journal of Blacks in Higher Education. (n.d.) *A Large black-white scoring gap persists on the SAT*. https://www.jbhe.com/features/53_SAT.html

Walpole, M., McDonough, P. M., Bauer, C. J., Gibson, C., Kanyi, K., & Toliver, R. (2005). This test is unfair: Urban African American and Latino high school students' perceptions of standardized college admission tests. *Urban Education*, 40(3), 321-349.

Zwick, R. (2007). College admissions in twenty-first-century America: The role of grades, tests, and games of chance. *Harvard Educational Review*, 77(4), 419-429.

Zwick, R., & Sklar, J. C. (2005). Predicting college grades and degree completion using high school grades and SAT scores: The role of student ethnicity and first language. *American Educational Research Journal*, 42(3), 439-464.

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