SAT Wars.

The Case for
Test-Optional Admissions

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Diversity Outcomes of Test-Optional Policies

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Over the years, a disproportionate reliance on SAT scores in college admissions has generated a growing number and volume of complaints (Syverson, 2007). Some applicants, especially members of underrepresented minority groups, believe that the test is culturally biased. Other critics argue that high school grade-point average (GPA) and results on SAT Subject Tests are better than scores on the SAT Reasoning Test at predicting college success, as measured by grades in college and college graduation. Finally, there is mounting evidence that SAT scores are correlated not only with race but also with parental income and education, which produces an upward social-class bias in the profile of admitted students (Atkinson & Geiser, 2009; Gerald & Haycock, 2006; Soares, 2007).

Owing partly to these concerns, growing numbers of four-year colleges are moving away from the SAT test, giving students the option of submitting SAT scores or eliminating them altogether from consideration in the admission decision (Jaschik, 2006).[1] At the beginning of 2010, the website of the National Center for Fair and Open Testing (FairTest, 2009) listed the names of more than 830 four-year colleges that do not use the SAT I or the ACT test to admit substantial numbers of freshmen. Many of these schools are nonselective institutions that have never required standardized tests, but momentum for test-optional admissions is picking up, especially among smaller liberal arts colleges. At the same time, the percentage of colleges indicating that they attach "considerable importance" to admissions test scores has risen from 46% in 1993 to 60% in 2006 (National Association for College Admission Counseling [NACAC], 2008).[2] Public institutions (68%) and those that enroll more than 10,000 students (81%) are most likely to fall into this category. Meanwhile, the percentage of schools that attribute "considerable importance" to grades in college preparatory courses and the strength of the high school curriculum has fallen slightly, from 82% in 1993 to 74% in 2005.

Left in the middle are those colleges and universities that still require standardized test results for admission but attach little importance to them. A survey of 461 senior-level admissions deans and enrollment managers at four-year colleges conducted by the *Chronicle of Higher Education* in early 2008 found that 88% of respondents said their institutions required the submission of standardized test scores (Hoover, 2008). But fully one-half of these administrators indicated these test scores had "little" or "no" influence on admission outcomes, and only one-sixth said they had "great" influence. It is presumably these schools that the National Association for College Admission Counseling's Commission on the Use of Standardized Tests in Undergraduate Admission had in mind when they encouraged institutions to

> consider dropping the admission test requirements *if it is determined that the predictive utility of the test or the admission policies of the institution . . . support that decision and if the institution believes that standardized test results would not be necessary for other reasons such as course placement, advising, or research.* (NACAC, 2008, p. 7, emphasis in the original)

There has been research discrediting the belief that SAT or ACT tests are biased against members of minority groups. The Commission on the Use of Standardized Tests in Admission concluded, "A substantial body of literature indicates that test bias has been largely mitigated in today's admissions tests due to extensive research and development of question items on both the SAT and ACT" (NACAC, 2008, p. 10). Consequently, this chapter focuses on the remaining two criticisms leveled at standardized tests. We begin by presenting new evidence on how well SAT I scores predict college academic outcomes for students at academically selective colleges and universities. But we reserve most of our attention for an examination of how adopting test-optional policies in admissions or disregarding standardized test scores altogether would affect the racial, socioeconomic, and academic profiles of admitted students.

Factors That Predict College Success

Evaluation studies that predict success in college are concerned with factors that are most highly correlated with college GPA or class rank at the end of the first year, with the likelihood of graduating, and with cumulative GPA or class rank at graduation. Steven Syverson, Dean of Admissions and Financial Aid at Lawrence University, has argued that both the SAT and the ACT are useful in predicting how well students will perform in their early years of college (Syverson, 2007, p. 57).[3]

Much debate, however, has centered on which measures of a student's high school academic performance are the *best* predictors of college success. Arguments typically emphasize two different sets of factors: scores on standardized aptitude tests versus indicators that students have mastered curriculum content. In a recent evaluation based on 150,000 students from 110 four-year colleges and universities, the New SAT introduced in the spring of 2005, which has a required writing section, does almost as well as high school GPA at predicting first-year college GPA. The two used in combination do best (Kobrin, Patterson, Shaw, Mattern, & Barbuti, 2008). At private and academically selective schools, the edge goes to the New SAT. Moreover, white males are the only demographic group for which high school GPA is a better predictor of first-year college GPA than the New SAT (Mattern, Patterson, Shaw, Kobrin, & Barbuti, 2008).

The National Study of College Experience (NSCE) includes data to inform this debate. Initiated at Princeton University, the NSCE collected data on all applicants for admission in the early 1980s, 1993, and 1997 to a subset of the selective colleges and universities contained in the College and Beyond database analyzed by Bowen and Bok (1998). NSCE data include information on whether applicants were admitted, whether they subsequently enrolled, and their later college academic experiences as measured by first-year GPA, cumulative GPA at graduation, and whether students graduated within 6 years. A rich variety of student demographic and high school academic performance measures are also included in the NSCE data.

The data in Table 12.1 demonstrate how well standardized admissions test scores, achievement test scores, high school classroom performance, and high school curriculum predict college success at the eight selective NSCE institutions for which relevant data are available. The top section of the table shows the effects of SAT I scores. This variable includes a conversion from ACT to SAT I scores if students submitted only ACT scores as part of their college application. It is clear that standardized admissions test scores are statistically significant and substantively important predictors of college grades. This conclusion stands whether academic performance is measured at the end of the first year of college or cumulatively at graduation. Other things held constant, a swing in SAT I scores from the bottom category of less than 1000 (on the old system of a maximum of 1600 points) to the top range of 1400 or above is associated with a gain of roughly 30 percentile points in class rank. Admissions test scores are not associated with the likelihood of graduating.

Other measures of academic potential are also associated with college academic performance. As one would expect, students who have demonstrated a mastery of curriculum content by scoring well on the SAT II Subject

TABLE 12.1 Academic Predictors of College Success

Predictor variables	First-year class rank[a]	Graduated in 6 years[b]	Class rank at graduation[c]
SAT I score[d]			
1400–1600	10.7**	1.00	8.7**
1300–1399	3.1	1.17	3.3
(1200–1299)	—	—	—
1100–1199	–6.2†	0.95	–7.3**
1000–1099	–8.7*	0.87	–15.3***
<1000	–20.8***	1.21	–22.0***
Average SAT II score			
750 and above	16.3***	1.45	19.8***
650–749	8.7**	0.91	5.5**
(<650)	—	—	—
High school GPA			
A+	15.1***	2.67*	16.3***
A	6.5†	1.93†	9.9**
A–	4.9	1.17	2.8
(B+ or lower)	—	—	—
High school class rank			
Top 10%	5.2	0.88	2.4
Next 10%	0.1	1.04	–2.4
(Bottom 80%)	—	—	—
Elite high school			
Yes	2.3	4.67***	3.4
(No)	—	—	—
Number of observations	2224	4390	3788

Notes: All models use weighted observations. Reference categories are shown in parentheses. Other variables incorporated in these models include race, social class, sex, immigrant generation, first-generation college student, home ownership, help with homework, legacy student, received financial aid, held campus job, recruited athlete, satisfaction with college social life, academic selectivity of college, number of AP and SAT II exams taken, merit scholar, and high school type. The model for class rank at graduation also includes college major as a predictor variable.

[a] Class rank expressed as a percentile. Coefficients are estimated from a linear regression. Data are based on first-year students who enrolled at one of eight NSCE colleges or universities in the fall of 1997. $R^2 = 0.311$.

[b] Coefficients are odds ratios estimated from a logistic regression. Dependent variable = 1 if student graduated within 6 years; 0 otherwise. Data are based on students who enrolled at one of eight NSCE colleges or universities in the fall of 1993 or 1997. $F_{(63, 4248)} = 5.39$. Prob > F = 0.0000.

[c] Class rank expressed as a percentile. Coefficients are estimated from a linear regression. Data are based on students who enrolled at one of eight NSCE colleges or universities in the fall of 1993 or 1997 and graduated within 6 years. $R^2 = 0.314$.

[d] Includes ACT scores converted to SAT I scores for students who reported only an ACT score.

† $p < 0.10$; * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$.

Source: Authors' calculations from the National Study of College Experience (NSCE); Espenshade and Radford (2009).

Tests and by having a high school GPA in the A or A+ range are predicted to do well in college. SAT II test scores are not associated with graduation rates, but having a high GPA in high school does matter. Students with a reported high school GPA of A+ are 167% more likely to graduate within 6 years than students with a high school GPA in the range of B+ or lower. Classroom performance in high school, when measured by high school class rank at graduation, does not appear to be associated with any of the NSCE measures of college success. Finally, high school curriculum—approximated here by whether a student graduated from one of 72 elite secondary schools, as identified by two senior admissions officers at Princeton University—is strongly associated with graduation rates but not with other college academic outcomes. Students who graduated from an elite high school are nearly five times as likely to graduate within 6 years as other students.[4]

We conclude from this brief review of the NSCE data that standardized admissions test scores are significant predictors of later college classroom performance—but not of 6-year graduation rates—at the selective schools considered in the National Study of College Experience. High school GPA matters, too, as do scores on SAT II achievement tests. Because each of these indicators contributes something important to an evaluation of an applicant's readiness to handle the academic demands at selective colleges and universities, admissions officers at elite colleges typically evaluate candidates by using a combination of academic indicators and do not rely on a single measure.

Diversity Outcomes of Test-Optional Policies

In this section we lay the groundwork for a systematic empirical examination of how test-optional admissions policies are likely to affect the racial and socioeconomic composition of admitted students at selective colleges and universities. We begin by presenting information on the relation between race and social class on the one hand and measures of academic achievement and performance in high school on the other. Then we describe the nature of test-optional policies and their anticipated effects not only on admission decisions but also on the composition of applicant pools. The following section describes the results of our simulation analyses.

Admissions Test Scores and Inequality

Those who worry about racial and socioeconomic diversity in higher education and about access on the part of underrepresented minority and lower-income students to the nation's top schools are concerned that an

overemphasis on standardized test scores in the admissions process pro-
duces an entering freshman class that is disproportionately white or Asian
and from upper social-class backgrounds (Shanley, 2007; Zwick, 2007).
Because graduating from a selective college imparts later economic rewards,
these observers argue that the current system of selective college applica-
tion, admissions, and enrollment reinforces an existing pattern of inequal-
ity from one generation to the next.

The heart of the matter is a strong correlation between standardized
admissions test scores, parental income and education, and race. An admis-
sions process that rewards applicants with high test scores tilts the outcome
in favor of students who come from more socioeconomically privileged
backgrounds. At the same time, a perception on the part of potential appli-
cants and their parents that SAT scores loom large in the selection process
may discourage students with more modest test scores from applying in the
first place. As a consequence, a disproportionate reliance on SAT or ACT test
outcomes in college admissions—whether in fact or in perception—tends
to exclude students from more marginal groups in society and to create an
entering freshman class that is largely white and affluent (Bowen, Kurz-
weil, & Tobin, 2005; Gerald & Haycock, 2006; Soares, 2007; Zwick, 2007).[5]

Table 12.2 contains new information on patterns in the NSCE data
between students' race, social-class background, and four academic out-
comes. These data are based on students in the combined applicant pool
of one or more of seven selective NSCE institutions in the fall of 1997.
Respondents who reported in the NSCE student survey that they came
from an upper-middle-class or upper-class family are grouped into the
"high" social class. Students from lower- or working-class backgrounds are
combined into the "low" category. Data in the first two columns show
clear positive associations between social-class background and perfor-
mance on the SAT I exam and SAT II achievement tests. The correlations
appear to be somewhat stronger for SAT I. Among students from the high
social-class group, 29% received a score of 1400 or better on the combined
SAT I Math and Verbal examinations. This percentage falls steadily with
social class to 14%—just half as much—among students from low social-
class backgrounds. The same association can be seen with average SAT II
scores, ranging from 54% who are high scorers among the high social-class
group to 32% among students in the bottom social-class category.

Column 3 in Table 12.2 suggests an inverse association between social
class and high school classroom performance. Slightly fewer than one-
quarter (24%) of students from a high social class report having a high
school GPA of A+. This proportion increases as one moves down the social-
class scale to a figure topping one-third (35%) among low social-class
groups. This negative association is not what one would expect within a

TABLE 12.2 . Academic Outcomes in High School Among Applicants to Selective
Colleges, by Social Class and Race[a]

Item	Percent with			
	SAT I score 1400+	Average SAT II score 650+	High school GPA of A+	Top 10% of graduating class
Total	25.4	48.5	26.6	61.8
Social class[b]				
High	28.7	53.8	23.9	61.4
Middle	24.0	46.2	27.7	63.4
Low	13.9	31.8	35.2	58.0
Race				
White	24.9	50.9	27.3	61.7
Black	7.2	18.3	11.4	34.2
Hispanic	14.6	38.5	25.5	59.9
Asian	36.0	52.8	29.6	70.8

[a]Data are based on applicants to seven NSCE colleges or universities for the 1997 entering class.
[b]"High" includes upper-middle and upper classes; "Low" includes lower and working classes.
Source: Authors' calculations from the National Study of College Experience (NSCE); Espenshade and Radford (2009).

particular high school, but NSCE applicants are drawn from many different high schools across the United States. The final column of the table exhibits relatively little correlation between social class and graduating in the top 10% of one's high school class.

The bottom half of the table suggests how students' reported race and measures of high school academic performance are associated. These data conform to widely observed patterns. Regardless of which academic outcome is considered, underrepresented minority students are least likely to be high scorers, whereas white and especially Asian students perform at the top. To use SAT I scores as an example, one-quarter of white students who took the SAT exam, and more than one-third of Asian students, received a score of 1400 or better. These figures stand in sharp contrast to that for Hispanic students, just 15% of whom achieved a score as high. Only 7% of black students taking the SAT achieved a score of at least 1400. Racial disparities are somewhat less pronounced for the remaining academic indicators, but they consistently favor white and Asian students over blacks and Hispanics.

Data from other sources confirm these findings. Geiser and Santelices (2007) examined the pattern of correlations between test scores and high school GPA on the one hand and parental income and education on the

other among first-time freshmen entering the University of California system between the fall of 1996 and the fall of 1999. All associations they found are positive, but the strongest ones are between SAT I Math and Verbal scores and parental socioeconomic status (ranging between 0.24 and 0.39). Weak positive correlations were measured between high school GPA and family income (0.04) and between GPA and parents' education (0.06).

SAT and ACT score reports for all test takers in 2007 show the same regularities. The SAT range that separates students from lower-income families (less than $10,000) and those from upper-income families (more than $100,000) exceeds 100 points on each of the three components of the New SAT test (Critical Reading, Mathematics, and Writing). For example, the average score on the Critical Reading component varies from 427 for students in the lowest income category to 544 among students in the highest income group (NACAC, 2008). A range of more than 100 points is also evident when students are arrayed by highest level of parental education (from no high school diploma to graduate degree). Black and Hispanic students receive the lowest average ACT scores (17.0 and 18.7, respectively), versus 22.1 for white test takers and 22.6 for Asian American and Pacific Islander test takers (NACAC, 2008).

SAT-Optional Policies

To increase diversity and help counteract these associations between standardized admissions test scores and parental socioeconomic status (SES), a growing number of colleges and universities are leaving it up to students to decide whether to submit SAT and ACT scores with their application packets. The nature of SAT-optional or test-optional admissions policies at selective institutions varies widely, depending on the type of institution and available alternatives (Hoover & Supiano, 2008). For example, at Wake Forest University, the first university ranked in the top 30 by *U.S. News & World Report* to adopt an SAT-optional policy, prospective students are told that submitting SAT I or ACT scores is up to applicants.[6] Candidates may submit these test results if they feel the scores appropriately reflect their academic abilities and accomplishments. But a failure to submit standardized admissions test scores will not be held against students in the admissions decision. In describing the new admissions process, the Wake Forest University (2008) website advises applicants, "If test scores are not submitted, there will be no negative effect on the admissions decision. An admissions decision will be based on what applicants do submit, not [on] what they do not."

A mental experiment is enough to anticipate the effect that adopting a test-optional admissions policy may have on the composition of admitted students. First, if the new policy is widely advertised, the number of appli-

cations is likely to increase. Students who previously believed they stood no chance of being admitted because of modest standardized test scores might now be encouraged to apply. Moreover, the composition of the applicant pool is likely to swing toward lower-income and underrepresented minority groups, because students in these groups typically receive lower scores on admissions tests (Bates College, 2004). Another reason the number of applications is likely to increase is that students from more affluent backgrounds who appreciate the educational benefits of diversity may be more likely to apply to an institution whose student body becomes more racially and socioeconomically diverse.

These expectations are supported by experiences of schools that have adopted test-optional policies.[7] In the year immediately following the implementation of new policies, total applications were up by 18% at Knox College, 12% at Lawrence University, and 18% at Drew University (Jaschik, 2006). Holy Cross reported a 41% increase in applications in one year, a gain that was accompanied by more geographic and ethnic diversity (McDermott, 2008). The proportion of admitted students from outside New England rose from 46% to 50%, and nonwhite admittees increased their share from 17% to 21%.

Not only is the applicant pool resized and reshaped by moving to a test-optional admissions policy, but the likelihood that a student with low admissions test scores will be admitted is higher, other things remaining the same. None of the schools in the NSCE sample has adopted a test-optional policy, and at these institutions there is a large admissions payoff to having high SAT or ACT scores. For instance, a student with an SAT score in the 1500–1600 range has a likelihood of being admitted to a selective private NSCE institution that is more than 10 times the likelihood of someone with a score in the 1100–1199 range, other things being equal. If a student with a top score (between 1500 and 1600) is compared with a student in the bottom category (an SAT score lower than 1000), the differential admissions advantage increases to a factor of 550 to 1 (Espenshade & Radford, 2009). The evidence suggests that there are similarly steep gradients associated with ACT and SAT scores at public NSCE schools. With so much weight placed on how one performs on standardized tests, the chances of being admitted to a top school would surely rise if the stigma attached to low scores could be erased from the minds of admissions deans.

The New Look of the Student Body

As the number of schools that have adopted test-optional admissions policies increases, there is mounting anecdotal evidence on the diversity implications of these changes. But there is little or no systematic research on

FIGURE 12.1 Hypothetical Relationships Between an Applicant's SAT Score and the Likelihood of Being Admitted to a Selective College, Other Things Being Equal
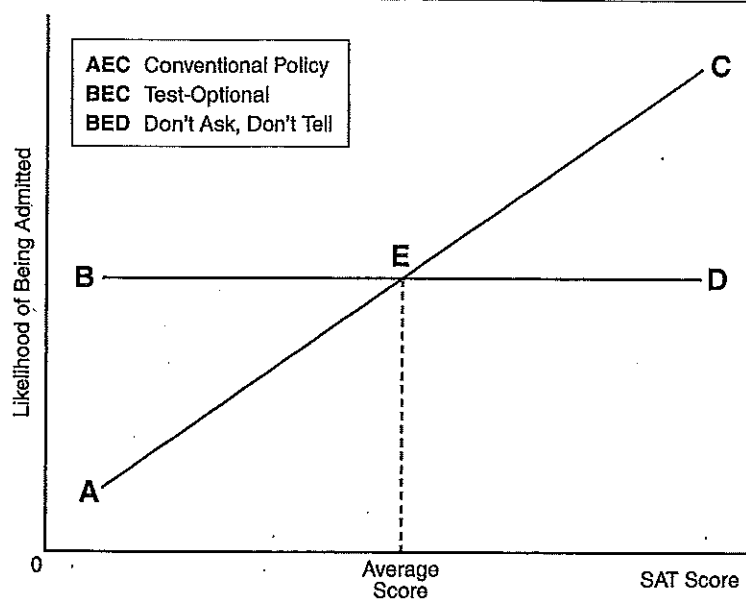
how a change from a more conventional admissions policy that emphasizes standardized test scores, along with other indicators of academic potential, to one that downplays the importance of such scores would alter demographic and academic profiles of admitted students (Syverson, 2007).

We begin by examining two alternative admissions policies. Figure 12.1 illustrates different hypothetical relationships between an applicant's "SAT score" and the chances of being admitted to a selective college or university, all other things being equal. In this illustration "SAT score" stands not just for scores on the SAT I Reasoning test but for outcomes on other standardized admissions tests as well, including the ACT test. The standard relationship between such scores and the probability of being offered a seat in the first-year class is shown by the line AEC. In this relationship, there is a strong positive and monotonic association between test results and admission probabilities. Students with higher scores always have a better chance of admission than students with lower scores, other things held constant.

Adopting an SAT-optional policy is equivalent to telling applicants, "We won't hold a low test score against you." This conclusion follows partly from the fact that students who do not submit standardized test scores typically have below-average test results. For example, based on their 20-year experience with optional SATs for admissions, Bates College

found that nonsubmitters score about 90 points lower than submitters on the Verbal SAT and 70 points lower than submitters on the Math SAT, for a total SAT gap of about 160 points (Hiss, 2004). In addition, admissions deans are saying to students that failure to submit standardized test scores will not harm a candidate's chances of success (Wake Forest University, 2008). This kind of test-optional policy is captured in Figure 12.1 by the line BEC. Now, instead of suffering an admissions disadvantage, students with below-average SAT scores have the same chance of being accepted as students with average scores. At the same time, however, students with above-average scores stand an above-average chance of being admitted.

An alternative admissions strategy can also be modeled by using Figure 12.1. Sarah Lawrence College has adopted an expanded version of SAT-optional admissions. They disregard students' SAT and ACT standardized test scores. According to their website for undergraduate admissions, "Our recent decision to remove all standardized testing from the admission process reflects the College's emphasis on writing rather than testing. That's right; we no longer look at standardized test scores" (Sarah Lawrence College, 2009). Under this policy, the College does not ask for admissions test scores, and if students submit them, they are ignored. This is a policy that we might characterize as "Don't Ask, Don't Tell." Because SAT and ACT scores are removed altogether from the admissions equation, they have no bearing on admissions outcomes. Other things being equal, students who have lower scores stand the same chance of being admitted as students with very high scores. In terms of Figure 12.1, a Don't Ask, Don't Tell admissions policy is reflected by the horizontal line BED.

Our analysis of the effects of alternative admissions policies takes as a starting point equations that predict the odds of being admitted to selective private and public colleges, respectively (Espenshade & Radford, 2009). These prediction equations include a large number of explanatory variables, including an applicant's race, social-class background, sex, citizenship, athlete and legacy status, academic characteristics (SAT and ACT test scores, as well as other academic indicators), high school type, participation in extracurricular activities, and character.[8] To model the effects of a change to an SAT-optional admissions policy, SAT I scores below 1200 are assigned the *same* weight as scores between 1200 and 1299. The weights on higher SAT scores are left unchanged. In addition, ACT scores below 25 are given the same weight as scores in the 25–29 range. Weights on ACT scores of 30 or higher are not altered. When Wake Forest University (2008) described its new policy, it announced, too, that "the high school curriculum and classroom performance combined with the student's writing ability and evidence of character and talent are the most important criteria." To capture these additional features, our analysis gives 25% more weight than the standard prediction equations to high school GPA, high school

class rank, average score on SAT II examinations, whether a student gradu-ated from one of the 72 "elite" secondary schools in the United States, extracurricular participation, and evidence of character.

Under the Don't Ask, Don't Tell admissions alternative, the importance of standardized admissions test scores is eliminated altogether by assigning zero weight to all categories of SAT I and ACT test scores. However, the additional weight given to other predictors of admissions outcomes under the SAT-optional approach is retained.

The earlier discussion highlighted the experience institutions have had with expanded applicant pools after they adopt a test-optional policy. We incorporate this experience into our analysis in two ways. Under the first alternative, we assume that students who are black or Hispanic or who come from lower- or working-class family backgrounds will apply to SAT-optional institutions in larger numbers than before. After Worcester Poly-technic Institute dropped its SAT requirement, minority applications rose by 30% (Jaschik, 2008).[9] We use this percentage increase and apply it to applicants who are black, Hispanic, or from lower- or working-class fami-lies.[10] Under a second approach, we identify candidates who have below-average standardized test scores and assume that students in these cate-gories will be 30% more likely to apply for admission. NSCE students who apply to selective colleges are already highly accomplished academically. As a result, "below-average" SAT I scores are defined as those less than 1200, and below-average ACT scores are those less than 25.

Changes to Applicant Pools

At the private NSCE institutions in our study, the total size of the applicant pool increases by 6.6% when students who typically have below-average admissions test scores are assigned more weight in the applicant pool. Of course, the number of applicants who are black, Hispanic, or from lower- or working-class backgrounds grows by 30%. But other categories of appli-cants are also somewhat affected. The number of white applicants increases by 2.7%, while the increase for Asians is 3.6%. The growth in applicants from middle-, upper-middle-, or upper-class backgrounds ranges between 2.7% and 4.2%. Alternatively, when 30% more weight is applied directly to applicants with low SAT or ACT scores, the applicant pool increases by 4.7%. Growth is greatest for black (10.7%) and Hispanic (12.1%) applicants and less for whites (3.6%) and Asians (4.0%). Applicants from lower-class backgrounds experience the largest increase (9.6%), followed by those from the working class (8.8%). For students from higher social-class categories, the increase ranges between 3.2% and 5.4%.

The increase in the total applicant pool is 4.2% at public NSCE institu-tions when 30% more weight is given to black, Hispanic, and lower- or

working-class students. This growth is less than the 6.6% gain registered at private colleges because groups whose weight is increased are relatively less numerous at public than at private NSCE schools. For instance, blacks and Hispanics account for 13.3% of all applicants to private NSCE institutions (before receiving more weight), compared with 9.5% at public NSCE schools. And NSCE students from lower- and working-class family backgrounds make up 12.3% of all applicants at private colleges, compared with 7.0% at public universities.

However, the size of the total applicant pool at public NSCE universities jumps by 15.0% when more weight is applied to applicants with low test scores. The increase is greatest for black (24.5%) and Hispanic (16.0%) students, but white (14.2%) and Asian (14.1%) students also gain. Growth is large among applicants from lower-class (25.5%) backgrounds, but increases in other social-class categories are also substantial and range from 13.8% to 16.6%. The reason that overall growth in applicant numbers is larger at public than at private NSCE institutions when more weight is applied directly to students with low scores is that the relative number of low scorers is so much greater at public institutions. Our definition of what constitutes a low SAT I score (less than 1200) or a low ACT score (less than 25) is based on the total NSCE student sample and does not distinguish between applicants to private and public institutions. Applicants to public institutions have much lower SAT scores than do applicants to private schools (1189 vs. 1340), making relatively more applicants to public institutions eligible for the boost given to candidates with ·low test scores.

Results

Our examination of the diversity implications of test-optional admissions policies is based on a new series of simulation analyses conducted separately for private and public NSCE institutions. Each student observation in the relevant applicant pool is passed through an admissions prediction equation, and a probability of admission is estimated by using that student's characteristics. The admission probability is multiplied by the sampling weight assigned to that case to estimate the expected number of students admitted with those characteristics. The constant term on the prediction equation is controlled so that the total number of students who are admitted equals the number who were actually admitted in the fall of 1997. In other words, an increase in the size of the applicant pool has the effect of making these schools more selective (the percentage of students admitted declines) and not the effect of growing the number of students admitted.

Our results for private colleges are displayed for five different scenarios in Table 12.3. The first column, labeled "Observed baseline admitted," shows the actual profile of students admitted to private NSCE schools for the fall semester of 1997. The remaining four columns show results from the simulations. Each simulation uses one of the two test-optional admissions policies—either the one we have called SAT-optional or the one described as Don't Ask, Don't Tell. In addition, each simulation incorporates one of two approaches for expanding the size of the applicant pool—either the one where more weight is targeted on specific demographic groups (labeled "More apps: I") or the one in which students with low test scores receive more weight (called "More apps: II").

The results show unambiguously that increased racial and socioeconomic diversity can be achieved by switching to test-optional admissions policies. Under the baseline condition in which low SAT scores diminish one's chances of being admitted, 8.3% of admitted candidates are black and 7.9% are Hispanic, for a total minority share of 16.2%. Figures in the remaining four columns show changes in the percentages compared with the baseline condition. For example, under an SAT-optional policy applied to an applicant pool enlarged by giving more weight to black, Hispanic, and low-SES candidates, the percentage of admitted students who are black would increase by 3.0 percentage points to 11.3%, and the Hispanic share would rise to 10.6%. The biggest impact on racial diversity is created by combining a Don't Ask, Don't Tell admissions policy with increased applications from black, Hispanic, and low-SES candidates. Here the share of black and Hispanic students among those admitted rises to slightly more than one-quarter (25.8%).

If we consider as our measure of socioeconomic diversity the share of admitted students who are lower- or working-class, then this type of diversity also increases under all four scenarios. In the baseline, 9.9% of admitted students fall into the low-SES category. This proportion reaches a maximum of 16.0% in the fourth column under a Don't Ask, Don't Tell policy.

One might reasonably ask whether the academic profiles of admitted students would be somewhat weaker as the share of minority and low-SES students increases. We can test this possibility by examining several indicators of academic potential. Average SAT I scores in Table 12.3 are lower in each hypothetical scenario than in the baseline, with declines ranging from about 20–25 SAT points under an SAT-optional policy to about 60 points with a Don't Ask, Don't Tell policy. At the same time, an SAT-optional policy produces slightly higher proportions of admitted students in the top categories of SAT II scores, high school GPA, and high school class rank. If one believes that performance in the high school classroom and mastery of curriculum content are the surest indicators of later college success, then both diversity and college preparedness are increased when

TABLE 12.3 Implications of Alternative Admission Policies and Changing Applicant Pools for the Profile of Admitted Students at Selective Private Institutions

Item	Observed baseline admitted	Difference from observed baseline admitted			
		SAT-optional[a]		Don't Ask, Don't Tell[b]	
		More apps: I[c]	More apps: II[d]	More apps: I[c]	More apps: II[d]
Total	12,233	0	0	0	0
Race (%)					
White	59.9	−5.1	−2.6	−6.1	−3.2
Black	8.3	3.0	1.6	5.5	3.8
Hispanic	7.9	2.7	1.3	4.1	2.6
Asian	23.9	−0.6	−0.3	−3.5	−3.2
Social class (%)					
Upper	7.2	−0.7	−0.4	0	0.4
Upper-middle	49.6	−4.0	−2.9	−6.6	−5.4
Middle	33.4	1.3	1.5	0.4	0.6
Working	8.3	2.5	1.2	5.1	3.5
Lower	1.6	0.8	0.5	1.0	0.7
Mean SAT I score	1405	−21	−23	−59	−63
SAT II score (%)[e]					
750 and above	15.1	0.5	0.6	−3.1	−3.0
650–749	56.8	−1.6	−2.1	−6.1	−6.8
Below 650	28.0	1.2	1.6	9.3	9.8
High school GPA (%)[e]					
A+	42.1	1.5	1.2	−2.3	−2.6
A	37.9	−0.3	−0.3	−0.6	−0.6
A−	14.3	−0.9	−0.6	2.0	2.4
B+ or lower	5.8	−0.4	−0.5	0.8	0.7
High school class rank (%)[e]					
Top 10%	81.1	0.6	0.2	−4.0	−4.4
Next 10%	14.8	0	0.4	2.9	3.4
Bottom 80%	4.1	−0.6	−0.6	1.1	1.0

[a] Applicants with SAT I scores below 1200 or ACT scores below 25 are assumed to have the same chances of being admitted, other things being equal, as applicants with SAT I scores between 1200 and 1299 or ACT scores between 25 and 29, respectively. Twenty-five percent more weight is given to high school GPA, high school curriculum, class rank at high school graduation, scores on SAT II or Subject Tests, having won a large number of awards or held leadership positions in academic extracurricular activities, and character (as measured by participation in a large number of community-service activities).

[b] Applicants' SAT I and ACT scores are given no weight in the admission process. The Don't Ask, Don't Tell policy gives the same amount of additional weight as the SAT-optional policy to performance in high school courses, participation in academic extracurricular activities, and character. See note a.

[c] This alternative assumes that the number of applicants who are black, or Hispanic, or from lower- or working-class backgrounds will increase by 30 percent.

[d] This alternative assumes that the number of applicants with SAT I scores below 1200 or ACT scores below 25 will grow by 30%.

[e] Percentage distribution is calculated on the basis of known outcomes.

Source: Authors' calculations.

colleges shift from more conventional to SAT-optional policies. A different picture emerges, however, when standardized admissions test results are disregarded altogether, as they are under Don't Ask, Don't Tell. In this case, not only do average SAT scores for admitted students decline, so do average scores on SAT II Subject Tests, high school GPA, and high school class rank. Because a Don't Ask, Don't Tell policy results in a greater increase in racial and socioeconomic diversity than does an SAT-optional policy, our results suggest that at some point a tradeoff emerges between diversity and college preparedness.[11]

Results for public universities are shown in Table 12.4. The picture regarding diversity outcomes is qualitatively much the same as it is for private institutions, but the quantitative effects are smaller for public NSCE schools. More racial and socioeconomic diversity is produced by admissions policies that downplay the importance of SAT and ACT scores. The largest increases in diversity come through Don't Ask, Don't Tell policies. For example, when these policies are combined with higher application rates from black, Hispanic, and low-SES students, the share of admitted students who are black or Hispanic rises by 4.2 percentage points (from 9.3% in the baseline to 13.5%). This scenario also produces the largest gain in socioeconomic diversity, from 6.6% of admitted students who are low-SES in the baseline to 10.4% in the simulation.

The story regarding academic preparedness is more varied, just as it was at private institutions. Average SAT I scores are lower in each of the four scenarios, but not by much. The decline is contained within a range of 8–16 SAT points. The proportion of students in the lowest SAT II category (an average score below 650) rises as one moves away from the baseline, and the increases are steepest under Don't Ask, Don't Tell. But in no instance are the changes particularly large. On the other hand, the proportion of students in the admitted student population who have excelled in their coursework in high school—as indicated either by high school GPA or high school class rank—is uniformly larger in each of the four scenarios than in the baseline. It is worth noting that the largest increases in proportions of students with high school GPAs in the A+ range and with high school class ranks in either the top decile or the top two deciles occur with the admissions policy that also produces the most substantial gains in racial and socioeconomic diversity—Don't Ask, Don't Tell.

At both private and public NSCE schools, a relaxed emphasis on SAT and ACT test scores in admissions decisions is accompanied by more racial and social-class diversity. However, each time a different hypothetical scenario is compared with the baseline, two things are changing—institutional admissions policies and the size of the applicant pool. How much of the greater diversity achieved through test-optional policies can be attributed to different admissions policies *per se* and how much to the changing size

TABLE 12.4 Implications of Alternative Admission Policies and Changing Applicant Pools for the Profile of Admitted Students at Selective Public Institutions

| | | Difference from observed baseline admitted | | | |
| | | SAT-optional[a] | | Don't Ask, Don't Tell[b] | |
Item	Observed baseline admitted	More apps: I[c]	More apps: II[d]	More apps: I[c]	More apps: II[d]
Total	14,185	0	0	0	0
Race (%)					
White	87.3	−2.3	−0.6	−4.2	−2.6
Black	7.8	2.1	1.0	3.5	2.3
Hispanic	1.5	0.4	0	0.7	0.3
Asian	3.4	−0.2	−0.4	0	0
Social class (%)					
Upper	2.8	0	−0.1	−0.2	−0.1
Upper-middle	52.5	0.3	1.7	−1.4	0.1
Middle	38.1	−1.9	−2.4	−2.2	−2.2
Working	6.1	1.4	0.7	3.6	2.1
Lower	0.5	0.1	0.1	0.2	0.1
Mean SAT I score	1206	−11	−16	−8	−14
SAT II score (%)[e]					
750 and above	0	0	0	0	0
650–749	35.6	−0.4	−1.5	−2.7	−4.6
Below 650	64.4	0.4	1.5	2.7	4.6
High school GPA (%)[e]					
A+	26.1	1.4	1.5	1.9	1.8
A	37.7	−0.5	0.9	0.8	2.4
A−	15.3	−0.1	−0.2	0.7	0.5
B+ or lower	20.9	−0.7	−2.1	−3.4	−4.7
High school class rank (%)[e]					
Top 10%	52.2	0.6	0.3	3.7	4.0
Next 10%	30.3	0.5	2.3	−0.6	0.5
Bottom 80%	17.5	−1.0	−2.6	−3.1	−4.5

[a]Applicants with SAT I scores below 1200 or ACT scores below 25 are assumed to have the same chances of being admitted, other things being equal, as applicants with SAT I scores between 1200 and 1299 or ACT scores between 25 and 29, respectively. Twenty-five percent more weight is given to high school GPA, high school curriculum, class rank at high school graduation, and scores on SAT II or Subject Tests.

[b]Applicants' SAT I and ACT scores are given no weight in the admission process. The Don't Ask, Don't Tell policy gives the same amount of additional weight as the SAT-optional policy to performance in high school courses. See note a.

[c]This alternative assumes that the number of applicants who are black, or Hispanic, or from lower- or working-class backgrounds will increase by 30%.

[d]This alternative assumes that the number of applicants with SAT I scores below 1200 or ACT scores below 25 will grow by 30%.

[e]Percentage distribution is calculated on the basis of known outcomes.

Source: Authors' calculations.

TABLE 12.5 Relative Contribution of Alternative Admission Policies to Greater Racial and Socioeconomic Diversity on Campus

Item	Percentage of total change			
	SAT-optional[a]		Don't Ask, Don't Tell[a]	
	More apps: I[a]	More apps: II[a]	More apps: I[a]	More apps: II[a]
Selective private institutions				
Larger share black and Hispanic[b]	32	69	57	84
Larger share lower and working class[b]	30	62	60	85
Selective public institutions				
Larger share black and Hispanic[b]	6	25	40	67
Larger share lower and working class[b]	0[c]	6	55	80

[a] See notes to Tables 12.3 and 12.4 for definitions.
[b] Among admitted students.
[c] Calculated value is –3 before rounding to zero.
Source: Authors' calculations; Tables 12.3 and 12.4.

and composition of applicant pools that typically accompany new admissions practices?

Answers to this question are contained in Table 12.5. Numbers in the table represent the percentage of the total change in racial or socioeconomic diversity that can be assigned to new admissions policies at private and public NSCE institutions.[12] Clearly the proportions vary substantially, from zero in one instance to 85% in another. Some generalizations can be drawn nevertheless. First, the proportions of total change in diversity assigned to admissions practices are uniformly larger at private colleges than at public ones. Second, altered admissions policies account for surprisingly similar relative amounts of change in racial and socioeconomic diversity. This is especially the case at private institutions. Third, new admissions practices exert their smallest influence on enhanced racial and socioeconomic diversity in the first column of Table 12.5, where SAT-optional admissions are combined with higher application rates from black, Hispanic, and low-SES students. On the other hand, at both private and public institutions, a switch to a test-optional policy accounts for the largest share of overall change in diversity outcomes when a Don't Ask, Don't Tell policy is invoked and accompanied by more applications from students with below-average admissions test scores regardless of the applicants' race or socioeconomic status.

The Varied Implications of Going Test Optional

In an open letter to faculty colleagues extolling his university's decision to adopt an SAT-optional admissions policy, Wake Forest professor Joseph Soares (2008) wrote:

> Making the SAT optional is a win-win situation for us. It allows us to tell the truth about the SAT: that it is not the gold standard for predicting college performance—insofar as any academic measure does that, it is HSGPA. And SAT "not required" admissions will give us greater social diversity and academically stronger students.

This claim is only partially supported when data from some of the most academically selective colleges and universities in the nation are examined.

We concur that a move away from conventional admissions practices that give substantial weight to standardized admissions test results and toward test-optional admissions policies is likely to produce more diversity on campus—both racial and socioeconomic. The proportion of admitted students who are black or Hispanic,or who come from the bottom two social classes is greater in each of the four simulations than in the baseline case at both private and public NSCE institutions. In all instances, the greatest amount of additional diversity relative to the baseline is found when a Don't Ask, Don't Tell admissions policy is paired with an applicant pool enlarged because there are more applications from black, Hispanic, and low-SES students. This outcome might be anticipated because a Don't Ask, Don't Tell policy pays no attention to applicants' SAT or ACT test scores.

But it is not at all clear that a more diverse student body is also an academically stronger one. The outcome depends on which measure one uses to gauge academic strength, what kind of test-optional policy is implemented, and whether the evaluation takes place among selective private or public schools. Average SAT I scores among admitted students are uniformly lower under all of the test-optional simulations. In general, at private colleges, other measures of academic merit (including average scores on SAT II Subject Tests, high school GPA, and high school class rank) are somewhat higher with an SAT-optional policy compared with the baseline, but markedly lower against the baseline with a Don't Ask, Don't Tell policy. When the analysis is directed to public institutions, either kind of test-optional policy produces lower average SAT II scores compared with the baseline. But the same policies appear to produce academically stronger students when measured by high school GPA and high school class rank. This is especially true when admissions deans are free to disregard altogether an applicant's scores on standardized admissions tests.

Finally, among the schools we studied, it is not true that SAT I scores lack power to predict college performance. Enrolled students' expected class ranks, measured either at the end of the freshman year or at graduation, can fluctuate by as much as 30 percentile points depending on whether a student's SAT I score is less than 1000 or greater than 1400. Other measures of academic potential, including SAT II scores, high school GPA and class rank, and high school curriculum, are also predictive of college academic outcomes. Selective college admissions deans typically rely on a combination of these academic indicators rather than on a single factor.

Our take-away message is this: given the great variety of postsecondary institutions in the United States—variety in terms of size, endowment, mission, geography, degree of selectivity, and whether private or public, among others—it is difficult to generalize to all campuses about the likely consequences of a move to a test-optional admissions policy. Such a change could have substantial benefits for some schools but not necessarily for all. One is reminded of a conclusion reached by the Commission on the Use of Standardized Tests in Undergraduate Admission: "a 'one-size-fits-all' approach for the use of standardized tests in undergraduate admission does not reflect the realities facing our nation's many and varied colleges and universities" (NACAC, 2008, p. 7).[13]

We close with two final comments. First, our simulations have emphasized the diversity implications of test-optional admissions policies for the profile of admitted students. But what admissions deans and enrollment managers care about ultimately is the impact on the entering first-year class. To carry our analysis one step further would require additional assumptions about what the yield from admitted students is likely to be. Yield rates can be highly variable, especially in times of economic uncertainty (Supiano, 2009; Zernike, 2009). Worcester Polytechnic Institute experienced a substantial jump in yield rates once it abandoned its SAT requirement. Yield rates increased most for women, underrepresented minority students, and students outside New England. Aiming for a first-year class of 810 students, it received deposits from 959 would-be freshmen (Jaschik, 2008). Our simulations hold constant the number of admitted students, but they could lead to freshman classes that are too big or too small. We prefer to cast our lot with admissions deans and confess to a large dose of uncertainty. Rather than trying to model yield rates explicitly, it seems preferable simply to acknowledge this limitation and move on.

Second, it is unclear how the current economic downturn will affect application rates to schools that have recently adopted test-optional admissions policies. The diversity-inducing effects of these newly instituted policies could be blunted if lower-income students are discouraged from applying. Admissions policies, too, might need to be adjusted to reflect the new

economic realities. Constraints on financial aid budgets could mean that schools can no longer afford to admit as many students from lower social-class categories, even if these students make it into the applicant pool. In short, today's economic climate could produce greater racial diversity at colleges with test-optional admissions policies but little more (or even less) socioeconomic diversity.

Notes

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1. Bryn Mawr College (2009), Loyola College (2009), and New York University (2009) are some of the most recent examples of four-year institutions that have announced a form of test-optional or test-flexible admissions policies.

2. Supporting empirical evidence on the behaviors of selective postsecondary institutions is provided by Alon and Tienda (2007) and Horn and Yun (2008).

3. Zwick (2002, 2007) provides additional empirical evidence that total (Math plus Verbal) SAT scores and ACT composite scores are useful in predicting first-year college grade point averages and college graduation rates.

4. Other research has shown that the predictive capacity of SAT I scores is overstated if parental socioeconomic status is not controlled (Geiser & Studley, 2001; Rothstein, 2004). Each of the regressions in Table 12.1 includes measures of parents' social class and other dimensions of socioeconomic status. We find that neither the number of advanced placement (AP) exams nor the number of SAT II achievement tests taken is related to any measure of college success. Significant predictors of college graduation rates are more likely to include institutional selectivity, parental socioeconomic status, a student's race, whether a student is foreign born or has a foreign-born parent, and how satisfied students are with the social aspects of college life.

5. West-Faulcon (2009) has argued that state bans on affirmative action coupled with substantial reliance on SAT scores in admissions to selective public universities have the effect of discriminating against racial minorities, in violation of Title VI of the 1964 Civil Rights Act, thereby setting the stage for race-based affirmative action as a remedial measure.

6. Scores on SAT II Subject Tests are already optional at Wake Forest University (2008).

7. Syverson (2007, p. 64) says that, "Virtually every college that has been test-optional for an extended period of time reported substantial growth in applications and matriculation among underrepresented students in the years since the introduction of their test-optional policy."

8. The remaining academic indicators include number of AP tests taken, number of SAT II or Subject Tests taken, average score on SAT II exams, high school GPA, high school class rank, and whether an applicant is a National Merit Scholar or a National Achievement Scholar. High school type is measured in two ways: (a) by whether the school is a public/nonmagnet, public/magnet, parochial/religious, or private school; and (b) by whether it is one of the 72 "most outstanding" high schools in the United

States as identified by two former Princeton University admissions officers. Participation in extracurricular activities is identified by having won "a large number of academic awards or leadership positions" in high school—the only extracurricular activity related to admissions outcomes at private colleges. "Character" in our models is measured by having participated in "a large number of community service activities." Variables for extracurricular participation and character are not included in the prediction equations for public universities because the regression coefficients are too unstable.

9. In the first year after Providence College introduced its test-optional admissions policy, applications from nonwhite students and from first-generation college students both increased by 21%. The enrolled first-year class included 31% more nonwhite students than in the previous year and 19% more students who were the first in their family to attend college. The percentage of the class that was eligible for Pell Grants increased from 7.3% to 11.8% (Shanley, 2007).

10. In practice, we increased the sampling weights for applicants in these categories by 30%.

11. Zwick's (2007) analysis also draws attention to the tension between promoting access and maintaining college selectivity.

12. To estimate these proportions, simulations at private and public institutions were redone by changing one input at a time. For example, the baseline case was compared with a simulation in which an SAT-optional policy was adopted but the applicant pool did not change. In this way, the amount of change in racial and economic diversity produced by each of the two admissions policies and each of the two ways of expanding applicant pools can be estimated. Numbers reported in Table 12.5 are the average of two figures—the percentage amount of change in diversity produced by a different admissions policy and 100 minus the percentage amount of change in diversity produced by an enlarged applicant pool.

13. In a similar vein, the President of Providence College, reflecting on his institution's decision to stop requiring SAT or ACT test scores for admission, concluded that, "Other institutions considering this initiative should do so in the context of their missions rather than simply joining the current trend" (Shanley, 2007, p. 435).

References

Alon, S., & Tienda, M. (2007). Diversity, opportunity, and the shifting meritocracy in higher education. *American Sociological Review, 72*(4), 487–511.

Atkinson, R. C., & Geiser, S. (2009). Reflections on a century of college admission tests. *Educational Researcher, 38*(9), 665–676.

Bates College. (2004). *SAT study: 20 years of optional testing.* Retrieved February 7, 2009, from http://www.bates.edu/ip-optional-testing-20years.xml

Bowen, W. G., & Bok, D. (1998). *The shape of the river: Long-term consequences of considering race in college and university admissions.* Princeton, NJ: Princeton University Press.

Bowen, W. G., Kurzweil, M. A., & Tobin, E. M. (2005). *Equity and excellence in American higher education.* Charlottesville: University of Virginia Press.

Bryn Mawr College. (2009). *Bryn Mawr adopts new testing policy promoting greater flexibility and emphasis on subject mastery.* Retrieved June 23, 2009, from http://news.bryn mawr.edu/?p=2793

Espenshade, T. J., & Radford, A. W. (2009). *No longer separate, not yet equal: Race and class in elite college admission and campus life.* Princeton, NJ: Princeton University Press.

FairTest. (2009). [Website of The National Center for Fair and Open Testing.] http://fairtest.org; last accessed December 28, 2009.

Geiser, S., & Santelices, M. V. (2007). Validity of high-school grades in predicting student success beyond the freshman year: High-school record vs. standardized tests as indicators of four-year college outcomes. *Research and Occasional Papers Series: CSHE.9.07.* Berkeley: Center for Studies in Higher Education, University of California. Retrieved October 2, 2007, from http://cshe.berkeley.edu/publications/publications.php?id=265

Geiser, S., & Studley, R. (2001, October 29). *UC and the SAT: Predictive validity and differential impact of the SAT I and SAT II at the University of California.* Oakland: Office of the President, University of California.

Gerald, D., & Haycock, K. (2006). *Engines of inequality: Diminishing equity in the nation's premier public universities.* Washington, DC: Education Trust.

Hiss, W. C. (2004, October 1). *Optional SAT, VP Bill Hiss '66 speaker notes.* Paper presented at the 60th Annual Meeting of the National Association for College Admission Counseling, Milwaukee, Wisconsin. Retrieved February 7, 2009, from http://www.bates.edu/x61659.xml

Hoover, E. (2008). What admissions officials think. *Chronicle of Higher Education, 54*(34), B3.

Hoover, E., & Supiano, B. (2008). Wake Forest U. joins ranks of test-optional colleges. *Chronicle of Higher Education, 54*(39), A21.

Horn, C. L., & Yun, J. T. (2008). Is 1500 the new 1280? The SAT and admissions since *Bakke.* In P. Marin & C. L. Horn (Eds.), *Realizing Bakke's legacy: Affirmative action, equal opportunity, and access to higher education* (pp. 145–169). Sterling, VA: Stylus.

Jaschik, S. (2006, May 26). Momentum for going SAT-optional. *Inside Higher Ed.* Retrieved February 2, 2009, from http://insidehighered.com/news/2006/05/26/sat

Jaschik, S. (2008, May 27). Another first for SAT-optional movement. *Inside Higher Ed.* Retrieved May 29, 2008, http://www.insidehighered.com/news/2008/05/27/wake

Kobrin, J. L., Patterson, B. F., Shaw, E. J., Mattern, K. D., & Barbuti, S. M. (2008). *Validity of the SAT for predicting first-year college grade point average.* (College Board Research Report No. 2008-5.) New York: College Board. Retrieved July 4, 2008, from http://professionals.collegeboard.com/profdownload/Validity_of_the_SAT_for_Predicting_First_Year_College_Grade_Point_Average.pdf

Loyola College. (2009). Loyola announces launch of test-optional policy. Retrieved June 5, 2009, from http://admissions.loyola.edu/admissions/admissions/freshman-admission/testoptional.asp

Mattern, K. D., Patterson, B. F., Shaw, E. J., Kobrin, J. L., & Barbuti, S. M. (2008). *Differential validity and prediction of the SAT.* (College Board Research Report No. 2008-4.) New York: College Board. Retrieved July 4, 2008, from http://professionals.collegeboard.com/profdownload/Differential_Validity_and_Prediction_of_the_SAT.pdf

McDermott, A. B. (2008). Surviving without the SAT [Commentary]. *Chronicle of Higher Education, 55*(7), A41.

National Association for College Admission Counseling (NACAC). (2008). *Report of the Commission on the Use of Standardized Tests in Undergraduate Admission.* Arlington, VA: Author.

New York University. (2009). *New standardized testing policy.* Retrieved April 20, 2009, from http://admissions.nyu.edu/

Rothstein, J. M. (2004). College performance predictions and the SAT. *Journal of Econometrics, 121,* 297–317.

Sarah Lawrence College. (2009). *Frequently asked questions*. Retrieved February 10, 2009, from http://www.slc.edu/admission/Frequently_Asked_Questions.php

Shanley, B. J. (2007). Test-optional admission at a liberal arts college: A founding mission affirmed. *Harvard Educational Review, 77*(4), 429–435.

Soares, J. A. (2007). *The power of privilege: Yale and America's elite colleges*. Stanford, CA: Stanford University Press.

Soares, J. A. (2008, September 24). *University makes SAT, ACT optional: Open letter to faculty on Wake Forest's new admissions policy*. Retrieved February 7, 2009, from http://www.wfu.edu/wowf/2008/sat-act/soares/

Supiano, B. (2009). For admissions offices, a spring of uncertainty. *Chronicle of Higher Education, 55*(22), A22.

Syverson, S. (2007, Summer). The role of standardized tests in college admissions: Test-optional admissions. *New Directions for Student Services, 118,* 55–70. Retrieved from www.interscience.wiley.com (DOI: 10.1002/ss.241).

Wake Forest University. (2008). *Questions and answers on Wake Forest's new SAT/ACT policy*. Retrieved May 29, 2008, from http://www.wfu.edu/admissions/sat-act/

West-Faulcon, K. (2009). The river runs dry: When Title VI trumps state anti-affirmative action laws. *University of Pennsylvania Law Review, 157*(4), 1075–1160.

Zernike, K. (2009, March 8). In a shifting era of admissions, colleges are sweating. *New York Times*.

Zwick, R. (2002). *Fair game? The use of standardized admissions tests in higher education*. New York: RoutledgeFalmer.

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.