

Test Bias: The SAT in the College Admissions Process
by Susan Woollen

I. Building a Freshman Class

In June 2003, Supreme Court Justice Sandra Day O'Connor wrote in the opinion for *Grutter v. Bollinger* that "we expect 25 years from now, the use of racial preferences will no longer be necessary to further the interest approved today" (*Grutter v. Bollinger* 124. S.Ct 35). Despite the hopeful prediction of Justice O'Connor, higher education needs to continue to contend with many challenges before her statement can become reality. Institutions with a goal of creating a diverse student population recognize they must first create a diverse applicant pool from which to determine if eligible students will meet the academic expectations in their classrooms. To assist admission officers in building a freshman class, an entrance exam score is often used in conjunction with other academic evidence.

The entrance exam most predominately used in the college admission process is the SAT. The ACT is the other entrance exam used for undergraduate admission consideration; however, this paper only focuses on the use of the SAT. Unless an institution has an open admission policy or has chosen not to use an entrance exam as part of its admission criteria, college applicants must take either the ACT or SAT and earn a score that will provide them with admission. For those institutions using an entrance exam, it is critical for college administrators to understand the legal ramifications involved in using an instrument many have said includes "built-in headwinds" against minorities (Kidder and Rosner, 2002). This paper specifically

addresses the gap in SAT test scores between Black/Hispanic students and white students by reviewing the history and purpose of the SAT, defining disparate impact, examining the legal history on testing, and the future of the SAT.

II. History and Purpose of the SAT

Carl Brigham, a Princeton University psychologist, conceived the idea of an aptitude test after assisting in the development of the Army IQ test in World War I. His initial purpose in designing the SAT was to measure mental ability. In fact, the test was initially called the Scholastic Aptitude Test; today, the SAT does not stand for anything. The College Board administered the first official SAT on June 23, 1926 to over 8,000 high school students. At that time, the SAT contained seven units devoted to verbal skills, including definitions, classification, artificial language, antonyms, analogies, logical inference, and paragraph reading, while the other two units were made up of number series and arithmetical problems (Lawrence, Rigol, Van Essen, and Jackson, 2003). The purpose of the first test was not to determine eligibility for college admission, but rather it was to help validate the SAT scores by correlating them with freshman year college grades. By demonstrating both reliability and validity, Brigham would be able to document the SAT could predict a student's academic performance in college.

As it met those expectations, Brigham began to feel strongly that the SAT should not be considered an aptitude test. He believed its sole purpose should be to measure achievement. In 1935, he wrote:

The test movement came to this country some twenty-five or thirty years ago accompanied by one of the most glorious fallacies in the history of science,

namely, that the tests measured native intelligence purely and simply without regard to training or schooling. I hope nobody believes that now. The test scores very definitely are a composite including schooling, family background, familiarity with English, and everything else, relevant and irrelevant. The “native intelligence is hypothesis is dead.” (Lemann, 1999, p. 34)

As standardized educational tests became more prominent in the college admissions process, the organizational structure of the College Board would change as discussions took place to create an agency to oversee the development of those exams. In 1947, the Educational Testing Service (ETS) was formed for the purpose of completing educational testing and development on the exams it promoted, including the SAT. In the 1950s, the SAT became a fixture in college admissions due to the efforts of President James Conant, Harvard University, who believed the test would equalize the new elite. In other words, this new category of elite would be based on intelligence not pedigree (Lemann, 1999). The test could be used to separate those who possessed the intellectual ability and who could benefit from a college education from those who did not possess such ability and promise. Thus, the SAT could also limit the number of individuals pursuing a bachelor’s degree.

Since the inception of the SAT, the test has undergone many revisions, including moving away from being considered an IQ test. The test now measures reasoning, thinking, and analytical skills that are acquired over time but is still designed to primarily predict first-year grades in college. In its current format, the SAT is a three-hour examination consisting of a verbal and mathematics section; it contains a total of 138

questions. Scores are given on a scale of 200 – 800 for each section and added together for a composite score. The verbal section consists of critical reading, sentence completion, and analogies (<http://www.collegeboard.com>). The math section contains questions involving arithmetic, algebra and functions, geometry and measurement, and data analysis, statistics and probability (<http://www.collegeboard.com>). There is also an Unscoresd Section containing questions the College Board will use to determine the reliability of questions to be used in future tests. It should be noted the College Board emphasizes the exam should not be the sole criteria for admission but should be used in conjunction with other variables, such as high school grade point average, class rank, or leadership ability to determine eligibility.

III. Disparate Impact

In 1998, the SAT included the following question:

The dance company rejects _____, preferring to present _____ dances in a manner that underscores their traditional appeal.

- | | |
|---------------|---------------|
| A. invention | emergent |
| B. fidelity | long-maligned |
| C. ceremony | ritualistic |
| D. innovation | time-honored |
| E. custom | ancient |

The correct answer is D. The racial background of those answering the question correctly was 38% Black and 62% White. (Young, 2003, n. pag.)

Questions, such as this one, have brought tremendous scrutiny and pressure against the SAT for being culturally biased against Blacks and Hispanics. For instance, in 2002, the average score for all SAT test takers was 504 on the verbal section and 516

on the math section for a total score of 1020 (<http://www.fairtest.org>). When broken down by ethnicity, Whites scored an average of 527 on the verbal section and 533 on the math section for a total average score of 1060; Blacks scored an average of 430 on the verbal section and 427 on the math section for a total average score of 857; and Hispanics scored an average of 453 on the verbal section and 457 on the math section for a total average score of 910 (<http://www.fairtest.org>).

The disparities in test scores have been used as evidence to support the argument the SAT has a disparate impact against minority groups in the college admission process. The definition of disparate impact is defined as a given practice that on face value appears neutral and is not applied with discriminatory intent yet has a discriminatory effect (McCaughey, 2004). By comparing test scores between ethnic groups, a standardized test can be culturally biased if a minority group consistently scores lower than the White group (Freedle, 2002). These differences in scores could be attributed to the types of questions selected by ETS and/or the academic preparation of individuals taking the test. Nevertheless, studies have shown minorities consistently score lower than their White counterparts. Opponents and proponents of the SAT contend selection of questions, as well as educational, economic, and social backgrounds of students are critical factors of success, but the parties differ in their assessment that the test is culturally or otherwise biased.

Due to the educational implications on the college admissions process, the validity and reliability of the SAT is often questioned. The credibility of a standardized test is measured by its reliability and validity standards. Reliability is defined as the

similarity of a person's scores on different administrations of the same test (Lemann, 1999). Objective tests, such as the SAT, have a higher reliability than subjective tests because of the scoring process. Reliability tests one question in which the highest test takers score consistently well, while the lowest test takers score consistently low (Young, 2003). Validity is then used to predict future outcome (Lemann, 1999). According to Wayne Camara, Vice President of Research and Development at the College Board, each question on the SAT is extensively evaluated for fairness and validity before it is selected for the actual exam. The review process includes an "intricate test-assembly process" in which each question undergoes "at least 6 reviews, including a fairness review using statistical methods" (Young, 2003, n. pag). The following steps are taken by ETS to develop a test question:

1. ETS submits a test question and inputs it into a database.
2. At least two test experts review the question for fairness. At least 10 percent of the questions are eliminated at this stage.
3. An approved question is included in the Unscoored Section of an SAT.
4. The results of the Unscoored Section are then evaluated and analyzed by test experts. Included in their evaluation is an examination of comparable abilities, gender, and race.
5. If approved, the question is pooled with other usable questions.
6. If the question is selected for an SAT, test experts will analyze it in conjunction with other questions on the test. Up to three to four other experts will review the question again. After that review, it will be evaluated once more in the context of

the entire test by a group of external members made up of admissions officers and high school counselors.

7. The College Board prints the test for national use. This entire process can take 18 months to 2 years to complete. (Gose and Selingo, 2001, n. pag).

The College Board contends test questions should not be based solely on ethnic differences because there are gender differences, as well as learning and physical disabilities that would also need to be taken into account. If the testing company were to compensate for one group, then biases could be created for others resulting in an unreliable test. The differences in test scores, according to the College Board, are not the result of a culturally biased test. It is the result of disparities in the quality of schools, teachers, lack of involvement by communities and parents, and fewer high schools placing minorities in AP courses (Mathews, 2003, n. pag).

Critics of the SAT argue there is statistical evidence to suggest the test is culturally biased against minorities. According to Jay Rosner, Executive Director of the Princeton Review Foundation, the test questions selected are comprised of those that White students will answer correctly more frequently than minorities (Young, 2003). The extensive pre-testing of questions described by the College Board allows the test maker to know in advance how students will perform on each question. For the October 2000 SAT, none of the questions favoring minority students were selected for the exam. Rosner's studies have shown that 54% of White students answer SAT questions correctly but only 40% of Black students achieve the same result (Young, 2003). If the College Board would select questions that decreased the gap in scores, then scores of minorities

could actually improve and make their entrance exam scores more competitive in the college admission process.

In 2002, Roy Freedle, a former ETS analyst, published a major study to suggest cultural and statistical biases exist within the SAT. Freedle asserted these biases could be minimized by using an alternative method of scoring by correcting for statistical and cultural biases (Freedle, 2002). His study results concluded Black students performed better on some harder test questions than White students. If the test could be scored using a revised scoring method to take these answers into account, Blacks could become more competitive in applying to more selective institutions. Freedle concluded:

White students may get 84 percent correct on some easy items, while African-Americans get a slightly lower number, say 82 percent, correct for that same item. Conversely, for some particular hard items, White students might get 30 percent correct whereas African Americans might get a slightly higher score, say 31 percent correct. What is unusual about these effects is their highly patterned nature; that is, many easy items show a small but persistent effect of African-Americans' underperformance, while many hard items show their over performance. (Freedle, 2002, n. pag)

The differences in scores can be attributed to cultural biases in that easy vocabulary words can be open to many different interpretations based on culture, while hard vocabulary words are not open to various interpretations because of their less frequent use and standard definitions. This study concluded harder vocabulary words would have a stronger relationship with high school curriculums and achievement

because of concepts found in classrooms and texts (Freedle, 2001). By using his revised scoring method, Freedle cited one case study in which a Black student would have raised her test verbal score from 290 to 600 and many students could feasibly raise their scores 100 to 200 points higher (Mathews, 2003).

It is interesting to note Freedle did not propose eliminating the current scoring process, only including a revised score for colleges to take into consideration for admission and scholarship purposes. In the College Board's official response to Freedle's article, the results of his study were said to be skewed due to misuse of statistical analysis and misinterpretation of how SAT scores are determined (<http://www.collegeboard.com>). Basically, the scores students achieved with his method of scoring were the direct result of them guessing.

Kidder and Rosner (2002) also concluded there is disparate impact in the SAT. They found on the October 1988 SAT exam, the Black-White disparate impact was 14.7% with Whites scoring higher on all 138 questions. Although not charging ETS or the College Board of discrimination, the authors stated the process of selecting questions for the test is based on the number of questions students answer correctly in pre-testing. For example, if substantial portions of students answer a question correctly, it has a greater chance of being selected for the final test versus a question that is answered correctly by a smaller portion of test takers. Thus, the question with more correct respondents becomes more reliable than the other. Still, the authors contend the differences in test scores could be minimized even by choosing pre-testing questions

minorities have scored higher on than Whites without actually comprising the reliability or validity of the SAT.

IV. Legal History and Implications for Higher Education

The legal ramifications of using the SAT for admissions are significant for institutions of higher education. Since minority groups score lower than their White counterparts, colleges and universities are targets for legal action by various groups contending racial bias. Although many of the legal cases have focused on affirmative action, the SAT is an essential element to the admissions process for many colleges and universities. Interestingly, the SAT has been able to withstand its critics despite the evidence its protractors have compiled. Nevertheless, court decisions are often based on the social and historical elements occurring at the time they are made or these same elements could create changes within the admissions process without the necessity of court decisions.

The benchmark case involving disparate impact is *Griggs v. Duke Power Company*. This case involved Black employees who brought suit against their employer, Duke Power Company, contending that it violated the Civil Rights Act of 1964 by requiring a high school diploma and a satisfactory intelligence test score for certain jobs previously limited to White employees. This criterion discriminated against Blacks, therefore, continuing its discriminatory policies against them. The case eventually went before the United State Supreme Court, which declared the 1964 Civil Rights Act prohibited the employer from requiring a high school education or passing an intelligence

test as a condition of employment since the test was not an indicator of job performance and discriminated against Blacks.

This case is significant because it establishes a framework for using disparate impact in standardized testing against minorities even if the discrimination is unintentional (Kidder and Rosner, 2002). Since ETS and the College Board do not receive federal funds, groups using the equal protection clause of the Civil Rights Act instead make their cases against public colleges and universities which do receive those funds and which utilize the SAT in their admission decisions. However, a plaintiff would have to prove the institution was motivated by discriminatory purpose in using the exam. This discriminatory purpose is difficult to prove because it “implies more than intent as volition or intent as awareness of consequences” (Kidder and Rosner, 2002, n. pag). Since the test is developed through a neutral process, it would be difficult to make a case against an institution using the SAT if that institution did not have a history of discrimination.

Title VI of the Civil Rights Act could provide another legal tool for those groups seeking a judicial remedy against public institutions utilizing the SAT. In filing a suit under Title VI, a party would also have to prove discriminatory purpose; however, the plaintiffs could enforce the regulations by bringing claims of disparate impact (Kidder and Rosner, 2002).

Yet, in 2001, the Supreme Court declared in *Alexander v. Sandoval* that private citizens could not sue to ensure that the provisions of Title VI are being enforced. In this benchmark case, Sandoval, a Mexican immigrant, sued the Alabama Department of

Public Safety for offering the driver's license test only in English. Her suit stated the policy of English only exams "had an unjustified discriminatory effect on the basis of national origin in violation of Title VI" (McCaughey, 2004, n. pag). The court's decision does not provide for private enforcement under Title VI unless an individual can prove that the public entity intentionally discriminated against him/her. This intentional discrimination is difficult to prove and opponents of the SAT contend this case will allow high stakes testing to continue without agency enforcement to ensure discrimination is not taking place (McCaughey, 2004).

In 1999, a lawsuit was filed against the Regents of the University of California alleging the 's admission criteria discriminated against minorities by relying too heavily on standardized test scores to determine eligibility. *Castaneda v. Regents of the University of California* claimed the University System was moving towards segregation after discontinuing affirmative action in 1995. Students of color were being denied admission in greater numbers than White applicants to the University of California at Berkeley and the university's reliance on Advanced Placement (AP) courses placed minority applicants at a distinct disadvantage because of fewer high schools with large minority populations offering those classes. In fact, in early 2000, the Eligibility Task Force at the University of California completed a study that predicted in 2005 almost 50 percent of elementary and high schools students in California would be Hispanic, but the University of California was only admitting Hispanic students at a rate of three to four percent (Hiss, 2001).

In 2003, the Regents settled with the plaintiffs by instituting a comprehensive review of candidates for admission with less emphasis placed on an entrance exam. Over a period of five years, the University of California at Berkeley is required to present to the court its current admissions criteria and guidelines; application reader training materials; a list of any changes to the criteria; and reports or studies of any proposed changes to the admission criteria (C 99-0525 SI). In addition, the university must retain a specified consultant to help the university define “merit” and provide analysis of the admission criteria to include validation (C 99-0525 SI).

The case also prompted the university of California President, Richard Atkinson, to announce that the “SAT is compromising our educational system” (<http://www.naacpldf.org>). In an independent move by the university, further validation studies of the SAT will be conducted to determine if it will continue to use the entrance exam at all as one factor in its admissions process. This move is significant because the university was the first public institution invited to become a member of the College Board in 1947. This long-standing relationship between the university and the College Board is critical to note because California is a major customer of the SAT (Lemann, 1999).

The NCAA is also a target for discrimination lawsuits for using the SAT and ACT to determine eligibility of student-athletes. In order to meet criteria to play as a freshman, applicants are required to meet the provisions of Proposition 16 which stipulates all Division I student-athletes must earn at least an 820 on the SAT (or equivalent ACT score) or face a loss of a year of eligibility and athletic aid

(<http://www.fairtest.org>). The NCAA argues the purpose of the proposition is to increase college graduation rates amongst student-athletes, particularly Blacks, who have a historically lower graduate rate than their White counterparts. Opponents of the proposition contest the NCAA is discriminating by using entrance exams that have been proven to be culturally biased against minorities. In fact, Proposition 48, which was the precursor of 16, was criticized by the president of ETS as having a detrimental effect on Black student-athletes because of the minimum entrance exam scores the NCAA established for eligibility purposes (<http://www.fairtest.org>).

In *Cureton v. NCAA*, the plaintiffs were Black student-athletes who met the NCAA grade point average requirement but did not meet the minimum SAT score. The district court held that Proposition 16 had a disparate impact on African-American students and violated Title VI. The court also held enjoined the enforcement of the proposition. However, the Third Circuit Court reversed the decision because Title VI applied only to programs or activities using federal funds, not to an entity at large. In other words, since the NCAA does not have admitting authority at college and universities, Title VI does not apply. Furthermore, the *Alexander v. Sandoval* decision states Title VI only covers intentional discrimination.

More recently, in *Pryor v. NCAA*, the Third District Court left open the possibility that purposeful discrimination suits could succeed against the NCAA. In this case, Kelly Pryor and Warren Spivey were offered athletic scholarships in 1999; however, neither student was eventually able to meet the guidelines of Proposition 16. Both students submitted a complaint against the NCAA charging intentional discrimination under Title

VI. The plaintiffs argued the NCAA was aware of disparate impact and the proposition would lead to a decrease in eligible Black athletes and fewer scholarship awards. The NCAA countered by stating one of the goals of the proposition was to actually increase the graduation rates of Black athletes and it did not have intent to discriminate against any athlete.

The district court did not find for the plaintiffs because they did not substantiate their claim of intentional discrimination. However, Pryor and Spivey appealed to the Third Circuit Court, which declared the plaintiffs had a sufficient claim for purposeful discrimination under Title VI (Munczinski, 2003). By providing the appellate court with substantial studies of Proposition 16 and its impact on minority students, the court determined the NCAA knew it would be decreasing the number of scholarships available to Black athletes. The court; however, ruled the plaintiffs claim of disparate impact did not hold because the *Alexander v. Sandoval* case prevented Title VI from being used by private action (Munczinski, 2003). Still, the NCAA faced pressure to reconsider the use of Proposition 16 and convened a committee to study alternatives to using entrance exams and grade point averages to determine eligibility.

Alexander v. Sandoval will make it difficult for private citizens to sue public entities, including colleges and universities, unless they can prove intentional discrimination. However, in the cases of *Pryor v. NCAA* and *Castaneda v. Regents of the University of California*, public and private entities can be challenged in the court system and can acquiesce to social and legal pressures even if court decisions do not rule for the plaintiffs. Institutions of higher education using an entrance exam should carefully

evaluate their admission requirements and study the implications of those requirements on their applicant pools. They should also be prepared to justify those requirements in relation to persistence and graduation rates of their students. If not, the implications include possible legal action resulting in binding decisions to change those requirements or succumbing to change through social pressures.

V. Future of the SAT

There are currently over 400 public and private institutions that do not require an entrance exam for admission purposes. Even if one were to eliminate those institutions with open admission practices, the percentage of schools that do not use an entrance exam make up a small portion of total institutions nationwide. Many colleges and universities continue to use entrance exams in conjunction with other pieces of academic evidence to determine eligibility of candidates.

For those institutions that have dropped the entrance exam requirement, many have concluded a standardized exam score does not accurately reflect a student's ability to complete college-level coursework at their particular institutions. Thyra Briggs, Dean of Admission at Sarah Lawrence College, wrote:

While the changes to the SAT are well intentioned, we feel it is important at this time for our admission policy to reflect our belief that standardized testing is not effective in evaluating a student's ability to succeed in a writing-based curriculum such as ours. (Hoover, 2003, n. pag)

At Bates College, which has not used entrance exams in 17 years, the vice president for external and alumni affairs stated:

On average, those who haven't submitted scores have earned cumulative GPA's that are four one-hundredths of a point lower than those of students who have submitted scores--a non-significant difference, to put it mildly. (Hiss, 2001, n. pag)

Since eliminating the entrance exams, Bates' applications have doubled from 2,200 to 4,400, while creating a diverse applicant pool which includes more women, minorities, immigrants, individuals with learning disabilities, and those from rural areas (Hiss, 2001).

However, for the majority of institutions, an entrance exam will continue to be used as a means to evaluate candidates for admission. According to John Blackburn, Dean of Admissions at the University of Virginia:

In a major system, where you have to make decisions about a lot of people and where you're responsible to the public, you must have some norm that cuts across high schools. Until we have something better, the SAT is really the only instrument that achieves that. (Gose and Selingo, 2001, n. pag)

In response to the University of California's pronouncement of the SAT in the admissions process, the College Board recently made revisions to the exam for the high school students who will be members of the freshman class of 2006. The most significant changes include a student-written essay (optional for colleges to use); analogies will be eliminated; shorter reading passages; quantitative comparisons have been removed; and more content will be included from the third year of college-preparatory math. The desired outcome is to move closer to the current curriculum offered in high schools in order to deflect criticism the test is still tied to its roots as a measure of intelligence.

Field trials conducted by the College Board indicate that “performance differences in subgroups (by race/ethnicity/ and gender) on the SAT are not exacerbated. The relative differences in scores for underrepresented students will not be due to any of the changes implemented with the new SAT” (<http://collegeboard.com>). Thus, the new SAT will use validity and reliability standards utilized by previous tests and gaps in scoring between minorities and Whites will continue. In response to critics about the continued gap in test scores, the College Board did create a Psychometric Board to assist its Research and Development Unit to continue studies and evaluations on the impact and implications of the new SAT.

VI. “Mistakes Against the Individual”

It is interesting to note the original appeal of the SAT was intended to create a level playing field amongst college applicants, albeit the targeted group was white males. Yet, almost 80 years after the test’s inception, a main criticism of institutions of higher education is that they discriminate by using the SAT against those individuals who could diversify the demographics of those seeking a higher education. By using the SAT in the recruitment and admissions process, institutions could be limiting their applicant pools by discouraging those with average scores from applying and prohibiting access to those individuals who could benefit the most from a higher education.

Despite the challenges to its content and intent, the SAT will probably continue to be a factor used by colleges and universities to assess the quality of applicant pools; to evaluate applicants for admission; and to measure the quality of freshman classes. Colleges and universities can seek alternatives to using an entrance exam by assessing

variables that may have higher and better correlations to student performance. If colleges do not have adequate resources (statisticians or dollars) to fund such studies, the reliance on an exam, such as the SAT, will continue.

The dependence on the SAT should then be coupled with a strong commitment to access and diversity; comprehensive reviews in the admissions process; and student development programs after enrollment to ensure the broadest consideration of candidates and to increase successful matriculation to graduation rates. It also requires society, government, and educational entities to achieve equity in education from kindergarten to high school. The disparities in test scores for admission are reflections of much larger social justice issues that must be addressed and resolved.

Perhaps it is fitting to conclude this paper with a quote that can be attributed to its creator. In the late 1930s, Brigham began to have doubts about the use of the SAT and stated, “a college being a humanitarian institution cannot afford to make mistakes against the individual” (Lemann, 1999, p. 34).

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