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Redundancy, Discrimination and Corruption in the Multibillion-Dollar Business of College Admissions Testing

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Redundancy, Discrimination and Corruption in the Multibillion-Dollar Business of College

Admissions Testing

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Submitted in Partial Fulfillment of the Requirements for the Degree

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My students motivate me to do my best every day I am in the classroom. High School students in the 21st century are required to work harder and filter more information than ever before. I hope that this thesis helps to take some of the stress out of their lives by lowering the stakes of their college admissions tests.

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Abstract

Most American colleges and universities require standardized entrance exams when making admissions decisions. Scores on these exams help determine if, when and where students will be allowed to pursue higher education. These scores are also used to determine eligibility for merit based financial aid. This testing persists even though half of the institutions that require the test scores from applicants have no idea if the scores offer any valuable information about prospective students.

The purpose of this study is to examine the biases inherent in standardized college entrance exams, their validity as predictors of college completion, the actual value of the information these test scores provide and corruption on the part of the testing organizations and the colleges and universities which require the exams.

Findings indicate that college entrance exams, which are biased in favor of wealthy, white, male students, are not as reliable a predictor of college grades or completion within the accepted four to six year time frame as high school grade point average. Corruption in the form of cheating, abuse and misuse exists on many levels in the business of college admissions testing. Testing agencies rake in millions of dollars in profit every year yet pay no taxes because they enjoy non-profit status even though they are commercial and not educational enterprises.

Chapter 1 Introduction

A student I know had a 4.4 weighted grade point average at her college preparatory high school, the result of straight A's, advanced placement courses and hard work. She was a dedicated and active volunteer tutoring underprivileged inner city children to help them prepare for high school. She was an accomplished pianist and involved in extra-curricular activities. This student did not excel at standardized tests. Her schoolwork was always better than what her high stakes tests indicated it should be. She scored 1840 on the 2400 point SAT. When it was time to apply to college, she selected 14 schools to receive her transcripts, essays, glowing letters of recommendation and SAT scores. Nine out of fourteen schools rejected her outright. One school put her on the waitlist and four offered her admission. The four who accepted her were what she considered her safety schools. They were the ones her counselor encouraged her to apply to, "just in case," she did not get in to any of her top choices.

This student had to choose between the two schools she disliked the least. One of them would not admit her to the honors program because of her SAT score. She chose the other school. Unhappy in this large state university she decided to transfer after 4 quarters. She had taken more than a full course load every quarter and had achieved Junior or third year status with excellent grades. She was accepted to several schools as a transfer student. Her entrance exam scores were rendered moot by her outstanding performance in college. Today this biology major is finishing her senior year of college. She is fluent in Spanish and proficient in French. With hopes of attending medical school she has become a licensed emergency medical technician and ambulance driver. She has an internship with an orthopedic surgeon and has co-authored 6 patient information pamphlets for Kaiser Permanente and translated them all to Spanish.

Ironically she recently completed a \$1,500 prep course to prepare for her old nemesis, the standardized test. She has to take the M-CAT to get into medical school.

On the other end of the spectrum are students who score extremely high on standardized tests in general and college entrance exams in particular. They are what are referred to as, “good test takers.” Some of these students gain entry to colleges and universities based primarily on their test score. Many of them discover that the test score does not translate into automatic success in higher education. Qualities such as perseverance and ability to adapt to new situations, while necessary for success, are not reflected in college entrance exams.

Students do not have the luxury of opting out of these exams. A few colleges and universities do not require them but the vast majority does. The students have to take the test and then anytime they ever need to provide their official scores they have to pay for the right to do so. The testing organizations own the scores in perpetuity.

Recently, disturbing reports of institutional corruption have come to light. Colleges wanting to justify their high tuition fight for the coveted top spots in college ranking reports. One of the categories is selectivity. The higher the average accepted students’ SAT or ACT scores are, the more selective the school. Schools have been caught inflating their self-reported accepted score range. This nefarious practice is worse than it appears on the surface because selectivity is also used to spur donations and determine bond ratings.

Statement of Problem

College entrance exams hold too much weight in the admissions decision while causing undue stress and expense for students and their families. Entrance exam questions are by their very nature culturally biased if not outright racist and sexist. Corruption in the business of college

admissions testing ranges from student cheating to colleges and universities falsifying accepted score figures to increase their rankings and status.

Purpose Statement

The purpose of this study is to examine the validity of college entrance exams as predictors of student college grades and potential to graduate from college within four to six years and to explore other more accurate and less biased and costly predictors. This study also examines the corruption in the current system that perpetuates the use of exam scores for inappropriate purposes.

Research Questions

This study addresses several questions about the usefulness and validity of college entrance exams. How valid are SAT/ACT scores in predicting college success as measured by college grades and graduation rates? Are these scores necessary for evaluating college applicants? Are exam questions geared toward the children of well-educated white people or are they relevant across cultures? What is the extent of corruption in the business of college admissions testing?

Theoretical Rationale

Modern standardized college admissions tests have their origins in the early twentieth century work of Binet and Simon (1916). Binet and Simon developed a theory about the development of intelligence in children and the Binet-Simon scale for intelligence testing. Ironically, the Binet-Simon scale was created as a means of effectively and efficiently evaluating so called defective children. The classifications of intelligence that Binet-Simon test takers could aspire to included idiot, imbecile and moron. (Binet & Simon, 1916) The work of Binet and Simon evolved into the Stanford Binet Intelligence Test when Stanford University Professor Lewis Terman revised the

original Binet-Simon test. The test is now in its fifth edition most recently revised in 2003.

(Becker, 2003) Modern college admissions tests sprang from this work.

As of 2009 more than 1.5 million American high school students took the SAT and more than 1.5 million took the ACT. Many of these students take both exams. (Soares, 2012) What began as a way to classify mentally retarded children in France a century ago has developed into a multibillion-dollar industry in the modern American quest for higher education.

Assumptions

SAT/ACT scores are a better indicator of socioeconomic status than potential success in college. High school grade point average is a better indicator of potential success in college than SAT/ACT scores. The perceived value of high entrance exam scores drives a multi-million dollar test prep industry in the United States and foments stressful and expensive repeat testing. The College Board, while enjoying non-profit status, is a big business that owns student scores in perpetuity. College admissions officers are aware of the shortcomings of the SAT/ACT but continue to succumb to the pressure of the testing agencies to require entrance exam scores as a condition for consideration for admissions rather than challenging the status quo. Corruption occurs when colleges inflate the scores of their accepted students to gain a higher selectivity score from ratings publications. This higher rating is misappropriated to spur donations and raise bond ratings. The P-SAT is currently used as the initial qualifying filter for National Merit Scholarships. Students of color and those with low socioeconomic status are routinely cut out of the competition for this valuable and prestigious award based on this one test score.

Background and Need

“Once high school GPA and achievement test scores are known, the incremental value of knowing the SAT score is trivially small,” (Murray as cited in Soares, 2012, p.71). The test has

become redundant and no longer accomplishes the stated goal of the College Board to, “...provide a path to opportunities, financial support and scholarships, in a way that's fair to all students” (The College Board, 2012, para.1). Quite the opposite is true. The SAT is “no longer seen as a compensating resource for the unprivileged, it has become a corrosive symbol of privilege” (Murray as cited in Soares, 2012, p.75).

Chapter 2 Review of the Literature

Introduction/Historical Context

“We pass through this world but once. Few tragedies can be more extensive than the stunting of life, few injustices deeper than the denial of an opportunity to strive or even to hope, by a limit imposed from without, but falsely identified as lying within” (Gould, 1996, p. 60-61).

I expected my research to take me back to the early 1900s when the original College Board was searching for a way to open doors to prestigious institutions of higher education for students from outside their pool of east coast prep school graduates. I discovered that the impulse to classify humans into categories is as old as recorded history. My quest had me reviewing the philosophy and teachings of Socrates from the fifth century B.C.E. Socrates advised that citizens of a republic should be assigned to one of three classes, rulers, auxiliaries and craftsmen. Socrates sought to educate and evaluate citizens and determine if they were made of gold, silver or brass. To this day a person’s character is often referred to as one’s mettle (Gould, 1996).

Over time Socrates’ philosophy developed into the so-called science of biological determinism, “...the claim that worth can be assigned to individuals and groups by measuring intelligence as a single quality” (Gould, 1996, p. 52). Rather than viewing intelligence as an amalgamation of various mercurial components, the biological determinist seeks to reify intelligence. They are compelled to make intelligence one solid and measurable thing like a body part.

What better way to quantify intelligence than to measure the brain or at least the vessel that protects it, the human skull. The dubious science of craniometry was born. So called scientists measured the skulls of their subjects and classified their intelligence based on their findings.

Samuel George Morton (1799-1851) was a famed American polygenist, one who believes the human races all have distinct origins. His major work in life was to prove scientifically through the measuring of human skulls that races are separate and unequal. Morton's research was viewed as irrefutable data on the mental worth of the human races. His rankings place whites on top, Indians in the middle and blacks on the bottom. It did not stop there. Among the whites Teutons and Anglo-Saxons were on the top, Jews in the middle and Hindus on the bottom (Gould, 1996).

Virginia physician Robert Bennett Bean published an article in 1906 that compared the brains of blacks and whites. His work provided hard numbers for those wishing to express black inferiority. He had the notion to go even further and declared that his research proved the superiority of men over women within the races (Gould, 1996).

It was at about this same time, 1904, when Alfred Binet was asked to develop a method to assess French schoolchildren who were not achieving at the levels their teachers expected. The original intent was to identify children who would benefit from specialized education and become contributing members of society. "It is the young children who really require intelligent methods. Consequently we should give the defectives the best teachers. Every fault of method committed in their education may have consequences which will prejudice them later on" (Binet & Simon, 1914, p. 24).

Binet had three rules for using his tests.

1. The scores are a practical device; they do not buttress any theory of intellect. They do not define anything innate or permanent. We may not designate what they measure as "intelligence" or any other reified entity.

2. The scale is a rough, empirical guide for identifying mildly retarded and learning-disabled children who need special help. It is not a device for ranking normal children.
3. Whatever the cause of difficulty in children identified for help, emphasis shall be placed upon improvement through special training. Low scores shall not be used to mark children as innately incapable (Gould, 1996, p. 185).

American standardized tests all had their genesis in the work of Binet and yet his express guidelines for the use of his tests are defied every time a "non-defective" student takes an entrance exam.

Review of the Previous Literature

Redundancy, discrimination and corruption are three major problems in the modern business of American college admissions testing. I address these three topics individually for the most part and collectively as appropriate.

Redundancy

The National Association for College Admissions Counseling founded in 1937 is an organization of high school counseling and college admissions professionals. In 2008 they published their Report of the Commission on the Use of Standardized Tests in Undergraduate Admission. In the executive summary of the report the commission states that, "Despite their prevalence in American high school culture, college admission exams-such as the SAT and ACT- may not be critical to making good admissions decisions at many of the colleges and universities that use them" (National Association for College Admission Counseling (NACAC), 2008, p.7).

The commission went on to state that individual factors such as standardized admissions test scores are not sufficient predictors of a student's potential success in college. They determined that tests which are linked closely to high school curriculum, achievement tests such

as Advanced Placement exams, requiring no outside preparation are predictive of a student's overall grades in college. The use of achievement tests combined with transcripts and recommendations without the SAT or ACT in admissions decisions would not negatively affect the college's ability to evaluate a potential student. This move would also have the benefit of encouraging schools to improve their curricula and their teaching. (NACAC, 2008) Richard Atkinson, president emeritus of the University of California and professor emeritus of cognitive science and psychology at the University of California, San Diego and Saul Geiser, research associate at the Center for Studies in Higher Education at the University of California, Berkeley came to a similar conclusion about the predictive value of the high school record versus entrance exam scores in their 2009 paper, *Reflections on a Century of College Admissions Tests* (Atkinson & Geiser, 2009). They dispute the assertion that high school grades are unreliable because grading varies from school to school. Atkinson and Geiser contend that even with fluctuations in grading standards a student's high school grades are still a better indicator of his or her potential success in college than entrance exam scores (Atkinson & Geiser, 2009). "This finding has been confirmed in the great majority of "predictive-validity" studies conducted over the years, including studies conducted by the testing agencies themselves" (Atkinson & Geiser, 2009, p. 2).

High School Grade Point Average (HSPGA) was determined to be not only a better indicator of grades in college but also of four-year graduation rates. In fact HSGPA is an even better predictor of overall college grades than of first year grades alone. HSGPA may be superior to admissions test scores because it is earned over a period of four years and measures more than just intelligence. A student's HSGPA is a reflection of their hard work and ability to stay the course over the long haul (Geiser & Santelices, 2007).

For their book *Crossing the Finish Line* Bowen, Chingos, and McPherson studied “the college records of nearly 150,000 first-time, full-time members of the 1999 entering cohorts at flagship public universities spread across the country and in four state systems” (p.112). They converted ACT scores to the SAT scale and found that for the purposes of their study, the two tests were equally useful as predictors of college graduation rates. They also concluded that high school grades are far superior as predictors of both four and six year college graduation rates than SAT/ACT scores. Bowen, Chingos, and McPherson went on to run individual regressions for each of 52 different universities. “The consistency of the results is extraordinary. *In all but one of these more than 50 public universities, high school GPA remains a highly significant predictor of six-year graduation rates after taking account of the effects of test scores*” (Bowen, Chingos & McPherson, 2009, p. 114-115).

The value of the HSGPA as a predictor of college graduation rates appears to hold regardless of what high school a student attended. “High school grades are sometimes viewed as a less reliable indicator than standardized tests because grading standards differ across schools. Yet although grading standards do vary by school, grades still outperform standardized tests in predicting college outcomes: irrespective of the quality or type of school, cumulative grade point average (GPA) in academic subjects in high school has proved to be the best overall predictor of student performance in college” (Atkinson & Geiser, 2009, p. 2).

To test this theory Bowen, Chingos, and McPherson added dummy variables to their regression equations to hold the high school constant. They found that a strong high school record from even a weak high school consistently predicted that the student would graduate from college. Conversely, students with poor high school records have much lower college graduation rates whatever the relative academic level of their high school (Bowen, Chingos, & McPherson

2009). The high school record is valuable for predicting college graduation regardless of where or what type of high school the student attends.

The admissions process places too much emphasis on just getting in to college and not enough on finishing or attaining a degree. The payoff for graduating from college is much higher than the payoff for getting in and spending a few years there. When students do not complete college, it has an adverse effect not just on them but on the American economy (Bowen, Chingos, & McPherson, 2009). Ben S. Bernanke, Chairman of the Federal Reserve Board told Harvard graduates “the best way to improve economic opportunity and to reduce inequality is to increase the educational attainment and skills of American workers” (Bernanke as cited in Bowen, Chingos, & McPherson, 2009, p. 1). David Leonhardt of the New York Times says “Education-educating more people and educating them better-appears to be the best single bet that a society can make” (Leonhardt as cited in Bowen, Chingos, & McPherson, 2009, p. 1).

Discrimination

The National Association for College Admissions Counseling Report of the Commission on the use of Standardized Tests in Undergraduate Admission expresses concern that admissions test scores, “...calcify differences based on class, race/ethnicity, and parental educational attainment. To come to some resolution, the Commission agrees that without confusing correlation with causation, admission offices must remain aware that test score differences persist among already under-served populations. Part of the public mission of colleges and universities is to ensure that differences that are not attributable to a student’s ability to succeed academically at an institution are mitigated in the admission process” (NACAC, 2008, p. 11). The Commission called on colleges and universities to account for inequities found in criteria for admission and expressed

concern that stakeholders of all types place too much emphasis on admissions tests scores (NACAC, 2008).

In researching their report, the Commission found that test preparation is likely to increase tests scores even if only slightly. Access to test preparation is not equal for all students. Students with low economic status and those from schools with few or no college counselors may lack information about test preparation and the resources to pay for it. The test fees alone can be a financial hardship for some students. It is the wealthier students who can afford repeated testing and the advantage of reporting the highest scores. The poorer students miss out on these opportunities and sometimes find themselves on the outs for both admissions and scholarships as a result. NACAC encourages colleges and universities to mitigate the adverse effects of test preparation (NACAC, 2008). “Ironically, tests that were meant to help level the playing field for talented students who were born *without* significant socio-economic advantages are now helping those *with* privilege to transfer their position in society down to the next generation” (NACAC, 2008, p. 43).

The commission is not alone in this thinking.

Compared to high school grade point average (HSGPA), scores on standardized admissions tests such as the SAT I are much more closely correlated with students’ socioeconomic background characteristics. As shown in Table 1, for example, among our study sample of almost 80,000 University of California (UC) freshmen, SAT I verbal and math scores exhibit a strong, positive relationship with measures of socioeconomic status (SES) such as family income, parents’ education and the academic ranking of a student’s high school, whereas HSGPA is only weakly associated with such measures. As a result, standardized admissions tests tend to have greater adverse impact than HSGPA on

underrepresented minority students, who come disproportionately from disadvantaged backgrounds. (Geiser & Santelices, 2007, p. 2)

Why are admissions test scores such excellent indicators of socioeconomic status? Jay Rosner, Executive director of the Princeton Review Foundation looked into this question for his contribution to Joseph A. Soares book *SAT Wars*. Rosner maintains that it is nearly impossible to gain access to information about test fairness because it is closely guarded by the Educational Testing Service and the College Board (Rosner as cited in Soares, 2012).

It is not by chance that questions are added to or removed from the SAT. There is an elaborate process of pretesting. Potential questions are given a trial run on sections of the SAT that are not scored. The students concede to answer these questions when they agree to the test protocol. Students are not told which questions are real and which are experimental. Questions are accepted, rejected or modified and retested on a future exam.

Rosner was able to review actual test questions generated by the ETS and used on the SAT in 1998 and 2000. ETS maintains that even with modifications in the test in 2005 the scores on Verbal and Math sections are fully comparable between tests taken prior to or after 2005. Rosner was looking for evidence of test bias based on gender or race/ethnicity. The process he used to determine bias involved taking the information from the Student Descriptive Questionnaire section of the test and analyzing their answers (Rosner as cited in Soares, 2012).

1. *Male* questions are items for which the correct answers are given by a higher percentage of males than females,
2. *Female* questions are items for which correct answers are given by a higher percentage of females than males,

3. *Neutral* questions are items for which correct answers are given by exactly the same percentage of males and females (Rosner as cited in Soares, 2012 p. 107).

This same process was used for determining if questions were white or Mexican-American or neutral and white or African-American or neutral. What he discovered about the nature of the questions sheds light on why females score lower than males and both Latinos and African-Americans score lower than whites on the SAT. Of the 117 non-neutral math questions one was skewed for females and 116 were skewed for males. Of the 275 non-neutral verbal and math questions one was skewed for Mexican-Americans 274 were skewed for whites. Of the 276 verbal and math questions none were neutral all were skewed white over African-American, (Rosner as cited in Soares, 2012).

“Each individual SAT question ETS chooses is required to parallel the outcomes of the test overall. So, if high-scoring test-takers--who are more likely to be white--tend to answer the question correctly in pretesting, it's a worthy SAT question; if not, it's thrown out. Race and ethnicity are not considered explicitly, but racially disparate scores drive question selection, which in turn reproduces racially disparate test results in an internally reinforcing cycle.” (Rosner, 2012, p.115).

Corruption

Corruption in the business of college admissions testing is found in many forms and is perpetrated by members in every category of stake holder. It goes far beyond just cheating by students desperate to gain an edge over their peers in this highest of high stakes contest.

“ACT has so flagrantly abused the spirit of its supposedly non-profit mission that its status has come under investigation. The Iowa state Attorney General has recommended to the IRS that ACT Inc's non-profit status be reviewed in light of the overcompensation of its CEO

and Board of Directors” (Americans for Educational Testing Reform, 2012, para.1). The stated mission of Americans for Educational Testing Reform is: to repeal the 501 (c) (3) tax-exempt status granted to ETS, The College Board, and ACT, Inc. (Americans for Educational Testing Reform)

Des Moines Register investigative reporter Lee Rood (2007) reported:

ACT, the college-entrance exam developer that has grown increasingly successful in taking on longtime rival SAT, is paying its influential board of directors about \$520,000 annually -- an amount that experts say surpasses the compensation of about 98 percent of nonprofit boards across the country. (para.2)The new, higher-profile ACT board has included former U.S. secretaries of education, heads of some of the country's largest universities and school districts, a former governor and national education policymakers. Two of the newest appointees to the board include the superintendent of San Diego City Schools and D. Robert Graham, a former U.S. senator from Florida. ACT has been encouraging policymakers to offer its college-entrance exams statewide in recent years, a move that is helping the company gain ground on rival SAT. Eight states now require, or plan to require, the exams for high school students as of this year, and a dozen are considering such a change, the company said. (para. 9-10)

ACT board members are not the only ones earning large sums of money from the fees paid by test takers. CEO Richard L. Ferguson is earning 978% of the non-profit industry average with his annual compensation of \$734,538. This compensation statistic is determined by calculating a ratio of compensation to revenue. According to tax filings for 2009, ACT had \$238,000,000 in revenue and untaxed gross profits of \$9,000,000. The College Board had \$623,000,000 in revenue and untaxed gross profits of \$53,000,000 for the same period.

(Americans for Educational Testing Reform, 2012) This revenue and profit all came from test fees paid by students and their parents. According to Robert Schaeffer (as cited in Soares, 2012) of the National Center for Fair & Open Testing, colleges and universities pay nothing to receive student test scores in spite of benefiting from all the demographic data that accompany the scores.

Both The College Board and ACT, Inc. spend large sums of money on lobbying efforts to influence government officials. In 2009 The College Board spent more than \$750,000 on political lobbying. ACT, Inc. spent \$130,000 on lobbying for the same period. (Americans for Educational Testing Reform, 2012) “As it turns out, most of these lobbying expenditures are made to solidify their existing monopoly positions and even generate new ones. In the past, they have even lobbied to maintain their unethical "guinea pig testing" policies, where test-takers are forced to participate in difficult research programs in the middle of their actual exams.”

(Americans for Educational Testing Reform, 2012)

Colleges and universities have been caught in the act of cheating with college entrance exam score data. In a high profile scandal, Baylor University was caught paying students that it had already accepted to re-take the SAT and boost their scores. Baylor then used these new higher scores when reporting their average accepted scores to college ratings agencies in an effort to appear more highly selective than the school actually is (Pope, 2012). In early 2012, Claremont McKenna, a small California college, admitted that it had been submitting falsified SAT scores to ratings publications for six years. Richard C. Vos, vice president and dean of admissions at Claremont McKenna took full responsibility for the fraud. Critical reading and math scores reported to U.S. News and others were bumped up by an average of 10-20 points each (Slotnik & Perez-Pena, 2012). The inflated scores helped Claremont McKenna make it into the top 10 liberal arts colleges as ranked by U.S. News and World Report.

Making it into the top 10 was not all that the fraudulent selectivity numbers helped secure for Claremont McKenna. The college's \$5,500,000 refunding revenue bonds series 2011 were given an Aa2 rating by Moody's Investors Services, Inc. This was an upgrade in rating from positive to stable (Moody's Investors Service, Inc., 2012). In justifying the improved rating Moody's included the following strength for Claremont McKenna College:

“*Small, but elite and extremely selective liberal arts college that is a member of The Claremont Colleges Consortium (CCC) in California, with 1,269 FTEs, low 17% acceptance rate and strong 43% yield for fall 2010” (Moody's Investors Services, Inc., 2012, para. 5).

The ratings agency reported the following under challenges:

“*Relatively small enrollment size of College as the competition for high academic quality students continues to increase, although we expect demand and selectivity of the College to remain strong given its location, programming, and membership in the CCC” (Moody's Investors Services, Inc., 2012, para. 11).

In the detailed credit discussion Moody's actually stated the school's average accepted SAT scores as a factor in their rating decision:

“Moody's anticipates that CMC will maintain a strong market position as a highly selective liberal arts college comprised of high quality students (median SAT score of 1410 for fall 2010) and benefit from a desirable location in California and membership in The Claremont Colleges Consortium” (Moody's Investors Services, Inc., 2012, para. 19).

Moody's, and presumably other ratings agencies, use accepted college admissions exam scores in rating Claremont McKenna and other colleges and universities in spite of the following recommendation not to do so by NACAC. “The Commission also considers the use of SAT and ACT scores in bond ratings of postsecondary institutions as an inappropriate use of standardized

admissions tests. Criteria reports for the major bond ratings companies indicate that SAT and ACT scores are used to help assess demand using student quality indicators. The bond rating agencies contend that higher SAT and ACT scores afford colleges and universities the ability to adjust admission standards downward to offset decreased demand. In other words, colleges whose students have high admission test scores can survive economic hard times by lowering their admission requirements and accepting students with lower test scores. The logic suggests that colleges with lower test scores are less able to ensure their financial well-being by adjusting admission requirements” (NACAC, 2008, p.31).

The NACAC Commission on the Use of Standardized Tests in Undergraduate Admission renounced the use of entrance exam scores in calculating bond ratings for two main reasons. First the test guidelines and the Standards for Educational and Psychological Testing restrict using such exams for anything other than what they were designed. Second the Commission feared that using admissions test scores to determine bond ratings would create undue pressure on admissions personnel to seek out students with ever higher scores (NACAC, 2008).

The selectivity rating is determined by how many applicants a college or university receives compared to how many they accept or more importantly how many they reject. Pulitzer Prize winning author Daniel Golden (2012) explains how this works in *The Preference of Privilege* a lecture he presented at Wake Forest University in 2009. According to Golden admissions officers encourage applications from students they do not expect to make the cut just to increase the number of applicants they deny. The schools do not tell these students that they are on an uneven playing field. Many of the spots in the freshman class are not even available. They have been set aside for athletes who play obscure expensive sports and the children of alumni and donors, (Golden, 2012). Golden quotes Northwestern University President Morton

Shapiro, “You’ve always been in an advantaged position to be rich and smart. Now you’re at an even greater advantage” (Fitzpatrick as cited in Golden, 2012, p.21).

Admissions test scores are frequently used to allocate merit aid to college and university students. The NACAC commission determined that the use of “cut scores” minimum test scores, to determine who receives merit aid should end. In particular the Commission requested that The National Merit Scholarship Corporation abandon the practice of using the P-SAT score to determine eligibility for this prestigious scholarship. The Commission expressed concern that entire sub-groups of students are being eliminated from the competition by this practice (NACAC, 2008).

The Institute for College Access and Success researched merit aid for a 2008 white paper titled, *Time to Reexamine Institutional Cooperation on Financial Aid*. Need based aid is calculated by determining the difference between the cost of attendance and the family’s ability to pay. Merit aid is given without regard to need and can be awarded for academic, athletic or other accomplishments. The institute looked at data from 946 public and private four-year colleges and universities or about 40% of all such schools. These institutions awarded over \$3,300,000,000 in merit aid. Ironically these same institutions reported unmet need-based aid of \$2,400,000,000. The reason that colleges pile aid on students who do not need it at the expense of students who do is the quest for rankings (Reed & Shireman, 2012). “Many college officials say they only reluctantly give a lot of aid in excess of need because their competitors do the same. If they lose talented students because of aid offers by other institutions, their rankings suffer and they have an even tougher time recruiting star students the next time around” (McPherson & Shapiro as cited in Reed & Shireman, 2008, p. 71).

Students feeling the pressure to score big on the ACT and SAT add their own chapter to the study of corruption in college admissions testing. The New York Times (Anderson &

Applebome, 2011) reported on an elaborate and lucrative cheating ring on Long Island in December, 2011. Students from affluent Nassau County, NY were paying as much as \$3,600 for a ringer to take the SAT for them in the hopes of improving their college acceptances. The scandal included fraud and fake IDs. Five test-takers were charged with felonies and 15 students who hired them were charged with misdemeanors. Test site security was called into question when it was discovered that at least one male test taker had been able to take the test for two female clients. The Times further reported that about 3,000 SAT scores a year are cancelled for cheating according to the Educational Testing Service. About 150 of those are cheating via impersonation.

Bernard Kaplan the principal at Great Neck North High School testified at a New York State Senate Committee on Higher Education hearing. He stated that the security implemented by the Educational Testing Service was, “grossly inadequate,” and that cheating is too easy and getting caught is too hard (Martins, 2011).

Interview with an Expert

On November 8, 2012 I interviewed David Hawkins, National Research and Public Policy Director of the National Association for College Admissions Counseling (NACAC), Washington, DC (personal communication, 2012). Hawkins was the staff liaison for the NACAC Commission on the Use of Standardized Tests in Undergraduate Admission when they prepared their 2008 report.

The following summarizes my interview with Mr. Hawkins.

Describe your training and background in the field of college admissions.

All Hawkins’s experience, like that of many admissions officers, has been on the job. He has never worked as an admissions officer but has served as the director of research and public

policy at NACAC for the past 13 years. He has a master's degree in government with an emphasis in statistics. Research and statistics have always been one of his passions. This led him to the field of government and politics and eventually to association work in government relations.

What are your sources of information to keep updated in your field?

Hawkins has six primary means of keeping abreast of trends and developments in the field of college admissions. He relies on two annual surveys NACAC conducts, one of colleges and one of high schools. This allows him to get a broad sense of what is happening in the field. These surveys are the source of the NACAC state of college admissions report. These are anonymous surveys of the people who are working directly with students as they navigate the college admissions process. NACAC has experts in academia who write their reports and bring a unique perspective making these reports a valuable source of information for Hawkins.

Hawkins looks at national research by other organizations such as the American School Counselors Association on the secondary side and the American Association of Collegiate Registrars and Admission Officers on the higher education side.

The NACAC leadership is an important source of information for Hawkins including the board of directors, national committees, president's counsel and governing assembly. These sources provide anecdotal information which is then used to feed questions and information into surveys and reports.

NACAC conferences which draw 6000 people with hundreds of sessions give Hawkins the opportunity for professional development alongside NACAC members.

Academic research in the field of college admission is monitored closely by Hawkins. This includes research in fields outside of education including economics and sociology.

The Department of Education maintains national data sets on admissions and counseling and is a good source of information for Hawkins and NACAC. He reviews reports out of the National Center for Education Statistics that have meaning for professionals in admissions and counseling. The department of Education puts out a report on High School Guidance Counseling and created The College Navigator to provide students with electronic information. They have a wealth of admission data that they collect from colleges which Hawkins and NACAC use.

What abuses or misuses of college admissions exam scores have you encountered?

Hawkins said the Commission on the Use of Standardized Tests in Undergraduate Admission was convened because of a feeling that admissions test had gotten out of control. He added the third category of over-emphasis to abuses and misuses.

Hawkins considers outright abuses to be actions that are dishonest and fraudulent. He noted two recent high profile cases of colleges manipulating their test score data at Claremont McKenna and Emory. The dean of admissions at Emory found out that the previous administration had been fudging the data. To his credit, he revealed this to the Emory president and the school made their discovery public. Hawkins said there is a great deal of pressure and students have been involved in cheating scandals where they pay other people to take the test for them. He contends that the testing agencies know these abuses are present because of the monitoring systems they employ. Hawkins believes the cheating occurs because of the over-emphasis on the tests which provides the incentive to cheat. NACAC's primary value in this process is to lay the groundwork for institutions to be able to think more broadly about their use of tests.

Hawkins said the commission focused more on misuses than outright abuses and that the commission listed three primary misuses in the 2008 report. Use of admissions test data in

college rankings was the first area he discussed. He said the testing agencies themselves will admit that the tests were designed for admissions and evaluating a student's readiness for the first year of college. They were never intended to be used as a measurement of an institution's quality. This continues to be a big concern for NACAC. Hawkins believes that the use of these unqualified rankings has a potentially detrimental effect on colleges and universities which take lower scoring students whom they believe will bring some other value to the school beyond a high test score. He thinks colleges and universities who make these more balanced admission decisions should also be considered among the best.

NACAC takes issue with the National Merit Scholarship use of cut scores on the P-SAT. They simply use the cut score to take the cream of the crop and the cut scores are different for different states. It is not consistent and they use it as a barrier to entry to their scholarship program. There are a lot of students who do very well in school but not so well on the P-SAT. Their ability to access that private stash of scholarship money is inhibited by the use of the cut scores. Standardized tests scores tend to correspond very strongly with income therefore the students who do not make the initial cut may be the students who need the money the most.

Bond ratings based on test scores goes hand in hand with the rankings issue. The agencies are judging an institution's fiscal health using a tool that was designed to evaluate a student's readiness to go to college. The bond ratings agencies say they use this as a measure because the schools could reduce their threshold for SAT scores and therefore admit more students. They translate this into fiscal health because the school has room to go down and reach more students. The logic does not hold for Hawkins because there is a floor to this method and eventually the school becomes open enrollment. By tying bond ratings to admissions scores, which are

indicators of socio-economic status, ratings agencies are rewarding schools who enroll wealthier students and punishing those who enroll lower income students.

Other misuses include realtors using local SAT scores to value real estate and employers using scores in hiring decisions after college. A possible misuse is that states have been adopting the ACT as a state accountability measure. The ACT is more curriculum-based than the SAT but still it was not designed as an accountability tool and should not be marketed or used for school accountability measurement.

Predictive validity research is used by some colleges to look at their admissions factors, particularly those that can be quantified like GPA and test scores. These variables are then compared to a student's performance in the first year of college and put into regression analysis to arrive at a correlation between the variables and the student's college GPA. Most often the high school grades are the factor that has the strongest correlation to first year college performance. The test scores show a pretty close correlation when looked at by themselves but as soon as the HSGPA is added the value of the test scores goes way down. Variables such as student stick-to-itiveness or financial situation are not measured in these regressions.

NACAC points out in their state of college admission reports that admissions tests are a solid second in terms of level of importance in the college admissions process. Scores are important but they will not make or break an application. So many people talk about test scores as though they are the key and colleges do not do much to play this perception down. Unfortunately Colleges encourage students to submit their best scores which prompts some students to get test preparation, and take the tests over and over again. The expense of test preparation and re-testing is prohibitive for many students.

Hawkins says the responsibility for overemphasis on college entrance exam scores rests primarily on the colleges and universities because they are the ones who require them. This responsibility is shared with the media who tend to focus on the scores and on a certain segment of counselors because they find the test scores to be an easy tool to match students and colleges.

Overemphasis is in the college's domain to address and rectify. After the 2008 commission report NACAC conducted a survey of their member colleges and universities the results of which have not been released yet. Hawkins said NACAC is sitting on a very, very explosive finding from the survey. Of the institutions that require tests, only half do any type of predictive validity tests. Fifty percent of colleges that require students to take the SAT or ACT have no idea what the test scores get them in the admission process. They are totally flying blind. Institutions are requiring tests without knowing what it gets them. This is critically important. NACAC has people on the commission, like Bill Fitzsimmons at Harvard, who know this field very well and suspected that there were very few colleges and universities who do predictability research. Hawkins thought they were wrong until the results of the survey came in and lo and behold they were right. NACAC has a provision in its statement of principles that says you need to do this research because if the tests don't get colleges anything useful they should consider not using them.

Derek C. Briggs Ph.D. of University of Colorado at Boulder wrote a paper for NACAC on test preparation based on NACAC member survey research. The margin of error on any one section of the SAT is about 20-30 points so if you take it over and over again your score will vary in that range. NACAC found that there were a significant number of colleges who would make a decision about accepting or rejecting a student based on scores that were within the

margin of error. The NACAC statement of principles states that these fine distinctions must not be made.

What challenges and/or resistance have you faced in working with the College Board and ACT?

Hawkins says both ACT Inc. and the College Board are very cooperative to work with and in the interest of disclosure they do sponsor activities for NACAC. This has not prevented Hawkins from coming out swinging at them on a number of occasions. He says when dealing with them as individuals and entities directly they seem honest and trustworthy. The idea that these are companies, as opposed to associations or good of the order non-profits is a major challenge to understanding what these testing organizations are. Some NACAC members believe that the testing agencies are insidious but Hawkins says that is because people experience cognitive dissonance when they try to reconcile the agencies' motives with their non-profit status. Hawkins says that if people understand the testing agencies as commercial entities they are much easier to understand and they seem less insidious.

ACT Inc. and College Board are vendors, commercial entities with specific and identifiable commercial interests even though they are non-profit. They are in the education market but that does not make them educators. It makes them have a vested interest in the outcome of anything they are involved in. They are not organizations that are primarily committed to education reform or educational opportunity. The biggest challenge is that they go around and blur the line between their commercial interest and the public interests. One of NACAC's biggest challenges is to communicate to the public and their own members that these agencies are not objective interests

One of the points the commission tried to make in 2008 was that people in the profession of college counseling and admissions should receive an array of training in the concept of

standardized admissions testing. The training should be obtained from someone other than one of the vendors. There is currently very little such training available outside of ACT Inc. and the College Board. The line between agencies training in their products and marketing their product gets blurred.

From your perspective, what role should entrance exams play in college admissions decisions?

It should be a limited role. Institutions need to determine first and foremost if the tests provide them any additional information about the student's likelihood of success at their school and each institution will have a different way of assessing that. Hawkins says the colleges and universities need to make a decision about the value of the information to the institution versus the cost to the student. Right now very few institutions do this.

Colleges and universities tend to lean on tests to explain acceptance and rejections. The college community at large, not just the admissions offices need to understand the role that tests play and the value if any that they provide the schools. The colleges and universities need to be vocal in pointing out that admissions exams scores are not the primary factor in decision making. This needs to be communicated not just to students and families but also to the school's own alumni and trustees. Ultimately this relies on research and the schools need to do the research

On the secondary school side counselors need to be aware of the limited influence of tests and be advocates for their students. It is not appropriate for high schools to brag about their SAT and ACT scores.

Hawkins advice for students is: "look in the mirror and if you see a test score then there is something wrong. Colleges want to know who you are."

Chapter 3 Method

Introduction

This was an ex-post facto research study relying primarily on an extensive review of existing literature. My research also included analysis of numerical data as well as personal interviews with David Hawkins of the National Association for College Admission Counseling and Whitney Hoyt a former high school teacher and administrator with a Master's Degree in school counseling.

Ethical Standards

This paper adheres to ethical standards in the treatment of human subjects in research as articulated by the American Psychological Association (2010). Additionally, the research proposal was reviewed by the Dominican University of California Institutional Review Board for the Protection of Human Subjects (IRBPHS), approved, and assigned number 9087.

Access and Permissions

Interview subjects were informed of the purpose of the study and willingly agreed to recorded interviews with the understanding that anything they said could be used in this thesis. Interview subjects also agreed to have their names and occupations stated in this document.

Data Gathering Strategies

The primary data gathering strategy employed in this research was an extensive review of the existing literature. This was augmented by interviews with experts.

Data Analysis Approach

Data were collected and organized by sub-topic, read, reviewed and cross-referenced. Expert interviews were recorded, transcribed and paraphrased.

Chapter 4 Findings

Overall Findings, Themes

In this modern era we are obsessed with data. Quantifying is more important than qualifying. The fastest and easiest way to quantify a student's supposed intelligence or knowledge is by subjecting them to a standardized test that can be scored by a machine in an office in a city they have never visited. American students know well the value of their Dixon-Ticonderoga #2 pencil when they sit for a standardized test and fill in the bubbles just so, with no extra markings on the Scantron sheet. Unfortunately half of the colleges and universities who require the students to take these exams have absolutely no idea if the information provided by the scores is of any value at all.

If colleges and universities would cease requiring ACT or SAT scores for admission students would save the enormous time and money spent on private entrance exam preparation, individual test preparation and fees to the testing agencies. Their energy could be re-directed to simply doing well, mastering content, and developing 21st century skills in high school.

American colleges and universities need to more accurately assess students' potential to stay the course and actually obtain a college degree than they are doing now. Getting in to college is not enough. Spending a few years in college may be edifying for a student but it will leave him with no more opportunity than his high school diploma and the financial set-back of spending money on tuition with no degree to show for it.

Chapter 5 Discussion /Analysis

Summary of Major Findings

Neither the SAT nor the ACT are as valuable as high school transcripts in predicting a student's potential to succeed in college. The tests while being time consuming, costly and stressful for students, are redundant and unnecessary for making admissions decisions.

College admissions tests are inherently discriminatory with questions being skewed toward males over females and whites over students of color. The tests are also biased in favor of wealthy students and those whose parents are well educated.

Corruption is rampant at every stage in the multi-billion dollar business of college admissions testing. Students cheat to get higher scores. Colleges and universities falsify their accepted student score data to increase their selectivity ratings. Bond ratings companies misappropriate test score data and use it to measure the financial stability of institutions of higher education. Both ACT Inc. and College Board enjoy non-profit status while making enormous profit from fees charged to high school students.

Limitations/Gaps in the Study

This study was limited by the availability of prior research to review. Interviews with more experts may have provided additional insight. The author intentionally did not interview sources at ACT, The College Board or Educational Testing Service because they are commercial enterprises with vested interests.

Interviews with college students at the completion of their freshman year could provide more perspective from the student's point of view. A review of these same students' entrance exam scores and first year college grades would provide specific validity data.

The author is currently involved in an interdisciplinary study on the effects of stress as measured by salivary cortisol on student exam scores. The results of that study, when available, may provide data on physical factors affecting student performance on college admissions exams.

Implications for Future Research

Self-sponsored validity research by every college and university requiring the ACT or SAT for admissions should be made an immediate priority. The practice of requiring high school students to pay for and submit to rigorous exams without any quantifiable research on the value of the test scores in evaluating the student should be halted.

Overall Significance of the Study

Millions of American high school students take the ACT or Sat every year. Many of these students take both exams. The conventional wisdom has been that these tests are an indicator of how well a student will do in college and are therefore a valuable assessment tool for admissions officers to use when evaluating applicants. This ideology is refuted by the research carried out by experts in the fields of education and admissions counseling. The ACT and SAT provide little or nothing of value in predicating college success that is not readily available for free in high school transcripts.

The racism, sexism and socioeconomic bias inherent in the test questions are more alarming than the redundancy of the exams. The ACT and SAT are no longer equalizers providing entrée to students from varied backgrounds. These exams have become a way to reward the privileged.

Both ACT Inc. and The College Board are big businesses with enormous un-taxed profits. They are neither educational nor service institutions. These commercial organizations earn their money from fees charged to hopeful high school students who have no choice but to take the

exams. There is no justification for ACT Inc. and College Board to continue enjoying their non-profit status.

About the Author

Monica Ellen Rizzo is a credentialed high school social studies teacher working at Bridge the Gap College Prep in Marin City, CA and as a substitute teacher throughout Marin County. Her fondest professional experience was teaching a sheltered US Government class to twenty-one students from twelve different countries with nine separate native languages. Rizzo's experience in the classroom underscores her belief that a student's potential cannot be condensed down to a test score. She would like to see the over-emphasis on standardized testing curtailed and the path cleared for students to simply experience the sheer joy of learning.

References

- Atkinson, R. C., & Geiser, S. (2009). Reflections on a century of college admissions tests. *Educational Researcher*, 38(9), 665-676. Retrieved from <http://ebscohost.com>
- Americans for Educational Testing Reform. (2012). *Scorecard: ACT Inc.: Introduction*. Retrieved October 15, 2012, from <http://aetr.org/the.facts/act>
- American Psychological Association. (2010). *Publication Manual of the American Psychological Association*. Washington, DC: American Psychological Association.
- Anderson, J., & Applebome, P. (2011, December 1). Exam cheating on Long Island hardly a secret. *New York Times*. Retrieved October 10, 2012 from <http://www.nytimes.com/2011/12/02/education/on-long-island-sat-cheating-was-hardly-a-secret.html?pagewanted=all>
- Becker, K. A. (2003). *History of the Stanford-Binet intelligence scales: Content and psychometrics*. (Stanford-Binet Intelligence Scales, Fifth Edition Assessment Service Bulletin No. 1). Itasca, IL: Riverside Publishing.
- Binet, A., & Simon, TH. (1916). *The development of intelligence in children*. Baltimore, MD: Williams and Wilkins, Co.
- Binet, A., & Simon, TH. (1914). *Mentally defective children*. London: Edward Arnold
- Bowen, W.G., Chingos, M.M., & McPherson, M.S. (2009). *Crossing the finish line: Completing college at America's public universities*. Princeton, NJ: Princeton University Press.
- Geiser, S., & Studley, R. (2002). UC and the SAT: Predictive validity and differential impact of the SAT I and SAT II at the University of California. *Educational Assessment*, 8(1), 1-26. Retrieved from <http://web.ebscohost.com>

- Geiser, S. & Santelices, M.V. (2007). Validity of high-school grades in predicting student success beyond the freshman year: High-school record vs. standardized test as indicators of four-year college outcomes. *UC Berkeley: Center for Studies in Higher Education*. Retrieved October 1, 2012, from <http://escholarship.org/uc/item/730620zf>
- Golden, D. (2012). The preferences of privilege. In J. Soares (Ed.) *SAT wars: The case for test optional admissions* (pp.13-22). New York: Teachers College Press.
- Gould, S.J. (1996). *The mismeasure of man*. New York: W.W. Norton.
- Martins, J.M. (2011, October 28). *Senator Martins attends senate hearing on sat cheating*. [weblog comment]. Retrieved October 4, 2012, from http://www.nysenate.gov/press-release/senator_martins-attends-senate-hearing-sat-cheating
- Moody's Investors Service, Inc (2012). Rating action:
 Moodys assigns Aa2 rating to Claremont McKenna College's (CA) \$30 million revenue bond series 2012; Outlook changed to stable from positive. *Moody's Investors Service*. Retrieved November 3, 2012, from http://www.moodys.com/research/Moodys-assigns-Aa2-rating-to-Claremont-McKenna-Colleges-CA-30-PR_259178?lang=pt&cy=bra
- Murray, C. (2012). Abolishing the SAT. In J. A. Soares (Ed.), *SAT Wars: The case for test-optional admissions* (pp.69-81). New York: Teachers College Press.
- National Association for College Admission Counseling. (2008). *Report of the commission on the use of standardized tests in undergraduate admission*. Retrieved May 15, 2012 from http://www.nacacnet.org/research/PublicationsResources/Marketplace/Document/TestingCommission_FinalReport.pdf

Pope, J. (2012, February 5). As colleges obsess over rankings, students shrug. *The Detroit News*.

Retrieved October 24, 2012, from <http://www.oakland.edu/upload/docs/Clips/2012/120206-rank.pdf>

Reed, M., & Shireman, R. (2008). Time to reexamine institutional cooperation on the financial

aid. *The Institute for College Access & Success*. Retrieved October 29, 2012, from http://www.ticas.org/pub_view.php?idx=346

Rood, L. (2007, December 4). Nonprofit ACT board's pay near top in U.S. *Des Moines*

Register.com Retrieved October 21, 2012, from http://www.desmoinesregister.com/article/20071111/NEWS10/711110330/Nonprofit-ACT-board-s-pay-near-top-u-s-?nclick_check=1

Rosner, J. (2012). The SAT: Quantifying the unfairness behind the bubbles. In J. Soares (Ed.),

SAT wars: The case for test-optional admissions (pp. 104-117). New York: Teachers College Press.

Slotnik, D.E., & Perez-Pena, R. (2012, January 30).

College says it exaggerated SAT figures for ratings. *New York Times*. Retrieved October 16, 2012, from http://www.nytimes.com/2012/01/31/education/claremont-mckenna-college-says-it-exaggerated-sat-figures.html?_r=0

Soares, J. A. (2012). *SAT wars: The case for test-optional college admissions* Teachers College Press.

The College Board. (2012). SAT: About the tests. Retrieved November 1, 2012, from

<http://sat.collegeboard.org/about-tests>