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Research Report
No. 2006-3

The SAT® As a Predictor of Different Levels of College Performance

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Contents

Introduction

The SAT Reasoning Test™ (SAT®) is the most widely used standardized test for college admissions. Research on the validity of SAT scores for predicting college performance has been conducted over several decades, going back to the 1950s and continuing to this day. Fishman and Pasanella (1960) reviewed some of the earliest SAT predictive validity studies, and Young (2001) provides the most recent review. Hezlett et al. (2001) performed a comprehensive meta-analysis of approximately 3,000 validity studies with more than 1 million students, and found that the SAT is a valid predictor of first-year college grade point average (FGPA), with multiple correlations ranging from .44 to .62.

Colleges typically use both high school grades and scores on standardized tests such as the SAT to predict a student's probability of success in college. One of the most persistent questions regarding the validity of the SAT is whether the SAT adds substantially to the prediction of college success after high school grades are taken into account. To address this question, the majority of SAT predictive validity studies examine the relationship of SAT scores and high school grades to first-year college grades. Many of these studies find that SAT scores make a substantial contribution to the prediction of FGPA, and that using admissions test scores such as the SAT in combination with a measure of high school grades produces higher validity coefficients than using either measure alone (Camara, 2005).

Although high school grades and SAT scores are highly correlated, these two indicators measure slightly different constructs and are expected to be related to college achievement in different ways. The SAT measures reasoning ability and educational achievement related to successful performance in college. High school grades measure educational achievement, but also measure noncognitive factors such as effort, attendance, conformity, and motivation (Stiggins, Frisbie, and Griswold, 1989). Based on the research of Goldman and others (e.g., Goldman and Hewitt, 1975; Goldman, Schmidt, Hewitt, and Fisher, 1974; Goldman and Widawski, 1976), Noble and Sawyer (2002) hypothesized that while average college grades are more likely to reflect noncognitive components, *high* college grades are more likely to reflect cognitive achievement and less likely to reflect noncognitive factors. Based on this hypothesis, Noble and Sawyer expected that predictions of moderate first-year college grades would be better when based on high school grades, while predictions of *high* FGPAs would be better when based on college admissions test scores (in their case, the ACT). They used logistic regression to study how well the ACT and high school grades predicted various levels of FGPAs (e.g., 2.0 or higher, 3.5 or higher). Their results indicated that ACT composite scores did a better job than high school grades of predicting FGPAs of 3.5 or higher. The study also found that both ACT and high school grades are effective predictors when success is defined as a FGPA of C (2.0) or better, but that in this case, high school grades were actually a better predictor.

Based on the same hypothesis offered by Noble and Sawyer (2002), this study examined the validity of the SAT for predicting various levels of student success in college, as measured by FGPAs. Logistic regression was used to predict the probability that a student would be successful or unsuccessful in achieving a FGPA at various levels, based on that student's SAT scores and high school grade point average (HSGPA). Although most predictive validity studies employ multiple regression as the main analytic procedure, this study employed logistic regression. In multiple regression, the focus is on prediction of a value on the dependent variable. One prediction equation is produced for the sample used in the analysis and prediction occurs on the full range of values of the dependent variable. In this study, however, the primary research question focused on whether the SAT or HSGPA is a better predictor of FGPA for students with high FGPAs as compared to students with lower FGPAs. Therefore, it was necessary to dichotomize the dependent variable to make the distinction between low and high levels of FGPA, and use logistic regression to predict the probability of success at each level.

Method

Analyses were conducted using data from 30 colleges that agreed to participate in a multiyear validity study sponsored by the College Board. The sample consisted of approximately 34,000 students who entered college in the fall of 1995. The sample was 53 percent female and 47 percent male, and approximately 75 percent white/Caucasian, 10 percent Asian American, 5 percent African American, 5 percent Hispanic, 1 percent Native American, and 4 percent other or unknown. The gender distribution in the sample was very similar to the 1995 population of college-bound seniors; however, the ethnic distribution differed somewhat. The sample had fewer African American and Hispanic students and more white students than the 1995 population.

The sample was of higher ability than the population of college-bound seniors, with a mean SAT verbal score of 577 (compared to 504 in the population) and a mean SAT mathematics score of 585 (compared to 506 in the population). The standard deviations of SAT verbal and mathematics scores were slightly smaller in the sample (91 for SAT-V and 93 for SAT-M) than in the population (113 and 112 for SAT-V and SAT-M, respectively). The mean self-reported high school grade point average for the

sample was 3.5 with a standard deviation of .53 (compared to a mean of 3.19 and standard deviation of .66 in the population). The mean FGPA for the sample was 2.8 with a standard deviation of .72 (comparison means for the population were not available).

Logistic regression analyses were performed six times on each subgroup using different levels of FGPA as the criterion variable. The criterion variable was whether the student earned a FGPA greater than or equal to 2.0, 2.5, 3.0, 3.25, 3.5, or 3.75. The regression models included the following predictors: 1) HSGPA only; 2) SAT verbal and math scores only (SAT); and 3) SAT and HSGPA. The logistic regression analyses were performed on the group as a whole, and separate analyses were conducted on each gender and racial/ethnic group.

Because selective colleges may place more weight on cognitive components in the grading of students, separate analyses were also performed on subgroups based on the selectivity of the college they attended. The information used to calculate an index of selectivity for the colleges and universities in the sample was taken from the College Board's *1995 College Handbook*. The selectivity index is the ratio of the number of students who were accepted to the college/university compared to the number of students who applied to that college/university. Three subgroups of students based on their colleges' selectivity were created: Level 1 included students attending the most selective colleges (those accepting less than half of their applicants). Level 2 included students attending colleges with average selectivity (those accepting between 50 and 75 percent of their applicants), and Level 3 included students attending the least selective colleges (those accepting more than 75 percent of their applicants). There were 4 Level 1 schools, 11 Level 2 schools, and 11 Level 3 schools in the sample.[1]

Table 1

Percentage of Students Achieving Various Levels of Success

		FGPA Greater than or Equal to:					
Subgroup	***N***	***2.00***	***2.50***	***3.00***	***3.25***	***3.50***	***3.75***
Females	18,209	89.7	73.4	47.3	31.4	17.8	6.7
Males	15,860	84.1	65.1	39.5	26.4	15.5	6.6
Native American	265	81.5	55.8	30.6	18.5	9.4	2.6
Asian American	3,361	89.1	73.3	49.4	34.4	20.3	8.0
African American	1,776	74.5	48.9	21.8	11.8	5.2	1.7
Hispanic	1,601	82.0	61.3	34.2	19.7	11.0	3.4
White	25,602	88.1	71.1	45.1	30.1	17.5	7.1
Other	741	87.6	71.8	47.4	34.3	19.7	6.6
TOTAL N	34,069	29,672	23,689	14,870	9,894	5,706	2,267
TOTAL %	******	87.1	69.5	43.6	29.0	16.7	6.7

Results

The results focused on the accuracy of the logistic regression models to correctly classify the individuals as successful or unsuccessful in their first year of college. Table 1 gives the percentage of students in the sample by gender and racial/ethnic group achieving the various levels of success as defined by their FGPA. At the lowest level of success, approximately 87 percent had FGPAs at or above 2.0; while at the highest level of success, about 7 percent had FGPAs at or above 3.75. The percentages varied for the different gender and racial/ethnic subgroups. For example, Asian American students were more likely than other subgroups to obtain FGPAs at or above all of the criterion levels, while African American students were least likely to obtain each of the six criterion levels.

Figure 1 and Appendix Table A1 show the accuracy rates for the various logistic regression models for the total sample. The accuracy rate represents the proportion of test-takers who were correctly classified, either as successful or unsuccessful.[2] An overall summary of the results is presented in Table 2. This table shows whether the SAT or HSGPA was a better predictor of successful

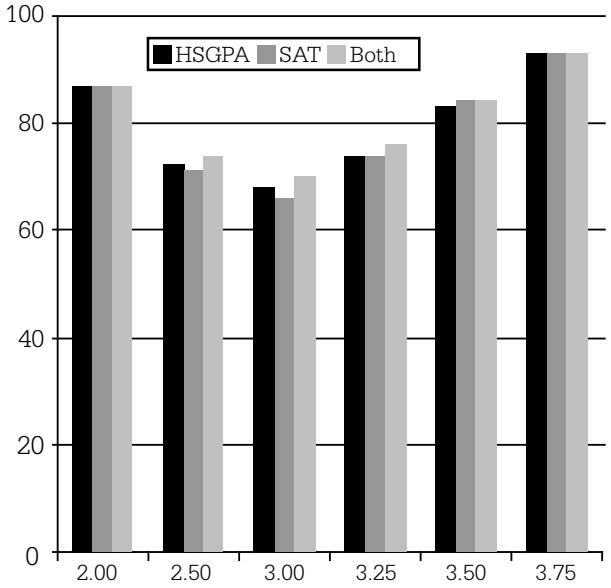

Figure 1. Overall accuracy rates for total sample.

[1] The *1995 College Handbook* did not have the information necessary to compute the selectivity index for 4 of the 30 institutions in the sample. The average selectivity is about .68, meaning about 68 percent of those who applied were admitted. The most selective school had an index of .22, admitting only 22 percent of those who applied, and the least selective school in the sample had an index of .95, admitting 95 percent of those who applied.

[2] The accuracy rates for the total sample and each subgroup examined in this report can be found in the Appendix to this report.

Table 2

Summary of Results for Predicting Successful Students

	FGPA Criterion Level					
Subgroup	***2.0***	***2.5***	***3.0***	***3.25***	***3.5***	***3.75***
Total Sample	SAT	HSGPA	SAT	SAT	SAT	---
Females	SAT	HSGPA	HSGPA	SAT	SAT	---
Males	SAT	SAT	HSGPA	SAT	SAT	---
Native American	=	HSGPA	SAT	---	---	---
Asian American	=	SAT	HSGPA	SAT	SAT	---
African American	SAT	SAT	SAT	SAT	---	---
Hispanic	SAT	SAT	HSGPA	SAT	---	---
White	SAT	HSGPA	SAT	SAT	SAT	---
Other	SAT	SAT	HSGPA	HSGPA	HSGPA	---
Attending Very Selective Colleges	=	HSGPA	SAT	SAT	SAT	---
Attending Moderately Selective Colleges	SAT	HSGPA	SAT	HSGPA	SAT	SAT
Attending Least Selective Colleges	SAT	HSGPA	HSGPA	HSGPA	HSGPA	SAT

Note: An "=" indicates that the SAT and HSGPA were equally effective predictors; an "---" indicates that neither measure was an effective predictor, or that there were not enough cases to evaluate the models.

students within each subgroup and for the total sample at each of the six FGPA criterion levels.

At two of the highest levels of success (i.e., FGPAs greater than or equal to 3.25 and 3.5), the SAT was found to have slightly greater predictive power than HSGPAs. Interestingly, at both the lowest and highest level of success, the accuracy rate of either the SAT or HSGPA alone is the same as the accuracy rate of the SAT and HSGPA combined. At two levels of criterion success (FGPAs at or above 2.5 to 3.0), HSGPA is better than the SAT when used as the sole predictor of FGPA. Neither the SAT nor HSGPA was successful at predicting the highest criterion level, 3.75.

Although overall the model is most accurate at the 3.75 level, there is a difference in the models' accuracy in classifying the successful and the unsuccessful individuals. As shown in Figures 2 and 3, at most success-criterion levels, with the exception of the 2.5 and 3.75 levels, the SAT is slightly more accurate than HSGPA in predicting the successful group, but less accurate than HSGPA in predicting the unsuccessful group. Overall we see that as the success-criterion level increases, the percentage of correct classifications for the unsuccessful group increases and the percentage of correct classifications for the successful group decreases. This finding is directly related to the decrease in the number of cases as the success-criterion level increases, as well as a decrease in the variability of HSGPA and SAT scores as the successful group becomes more elite. At the highest criterion level (3.75 FGPA), the accuracy rate for both the SAT and HSGPA was zero for predicting successful students and 100 percent for predicting unsuccessful students.

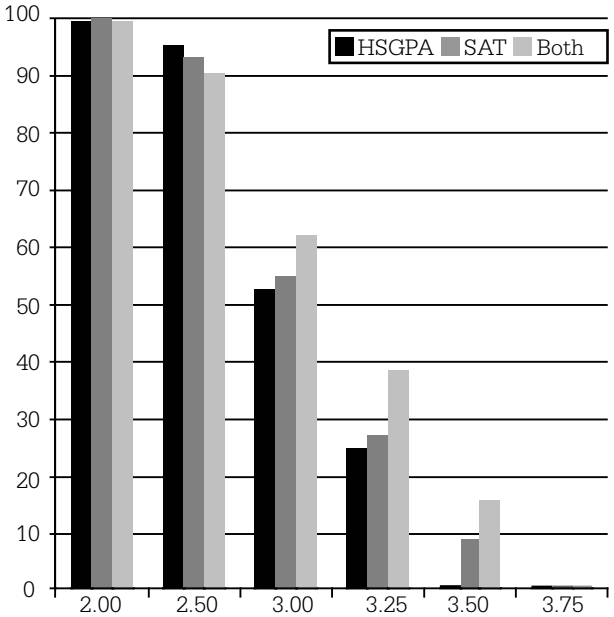

Figure 2. Overall accuracy rates for successful students.

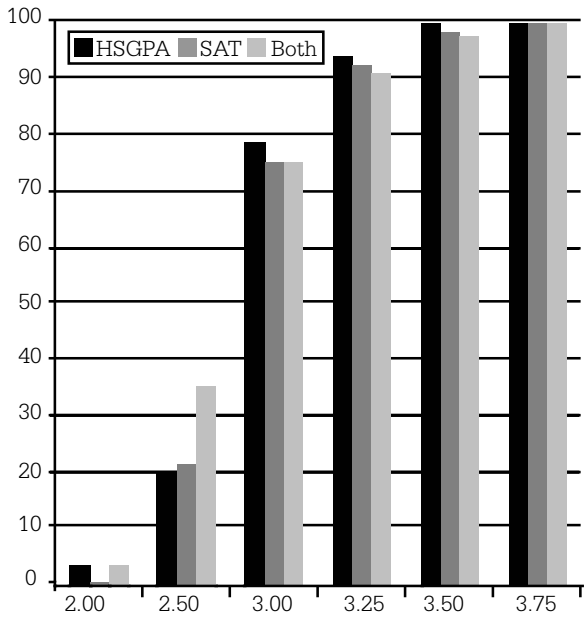

Figure 3. Overall accuracy rates for unsuccessful students.

Figures 4 and 5 show the accuracy rates for the three logistic regression models for successful females and males, respectively. The results for unsuccessful females and males may be found in Appendix Table A2. In all logistic regression models, females are correctly classified at higher rates than males for the lowest two FGPA criterion levels (2.0 and 2.5), while males are correctly classified at higher rates than females for FGPAs of 3.0 and higher. There is a sizable difference in the accuracy rates for females and males who were successful and unsuccessful. With only one exception, in all models and all FGPA criterion levels, successful females were correctly classified at higher rates than males. The logistic regression model with HSGPA as the sole predictor (Model 1) results in higher accuracy rates for successful females at the 2.5 and 3.0 criterion levels, while the model with the SAT as the sole predictor (Model 2) results in higher accuracy rates for successful females at the 2.0, 3.25, and 3.5 criterion levels. Conversely, the highest accuracy rates for unsuccessful females are produced by Model 2 (SAT only) at the 2.5 and 3.0 levels and Model 1 (HSGPA only) at the 2.0, 3.25, and 3.5 levels. Model 2 produces higher accuracy rates than Model 1 for successful males at all but two criterion levels (3.0 and 3.75).

The classification rate for females using the SAT alone is equal to or slightly higher than using HSGPA alone at all FGPA criterion levels. For males, the use of the SAT alone produces an accuracy rate that is equal to or slightly higher than that of HSGPA alone for all but two FGPA criterion levels (2.5 and 3.0). The combination of HSGPA and the SAT (Model 3) increases the accuracy rate over either predictor used alone in many but not all cases. Overall for both females and males, Model 3 increases the accuracy rate at all FGPA criterion levels except for the lowest (2.0) and highest (3.75). For successful students, Model 3 increases the accuracy rate at the 3.0 through 3.5 levels; for unsuccessful students, the two-predictor model increases the accuracy rate over either of the single-predictor models only at the 2.5 criterion level for females, and at the 2.0 level for males.

Figures 6–9 show the accuracy rates for successful students by racial/ethnic group (Native American students are not included due to the small number of students in this study). The full results for both successful and unsuccessful students are displayed in Appendix Table A3. For Native American students, the SAT model has a higher accuracy rate than the HSGPA model at the 2.5 and 3.0 levels, while both models are equally effective for the 2.0 level. For Asian American students, both models are equally effective across all FGPA levels with no difference larger than 0.5 percent. For African American students, the HSGPA model has a higher accuracy rate than the SAT model at the 2.5 FGPA level, but the SAT model has a much higher accuracy rate for predicting success at FGPA levels between and including 3.0 and 3.5. At the highest level of success (3.75 and higher), both models have the same accuracy rate. The HSGPA model is slightly better than the SAT model in predicting Hispanic and white

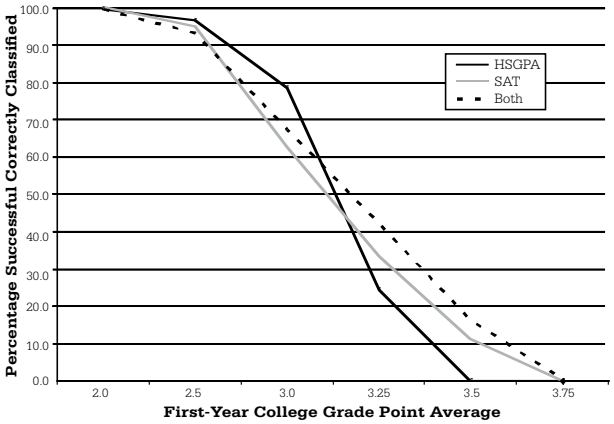

Figure 4. Accuracy rates for successful females.

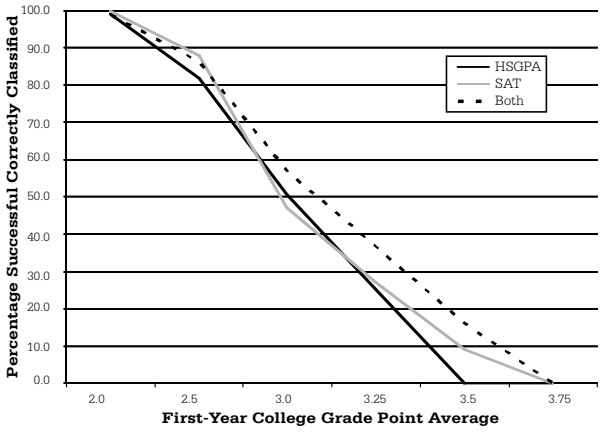

Figure 5. Accuracy rates for successful males.

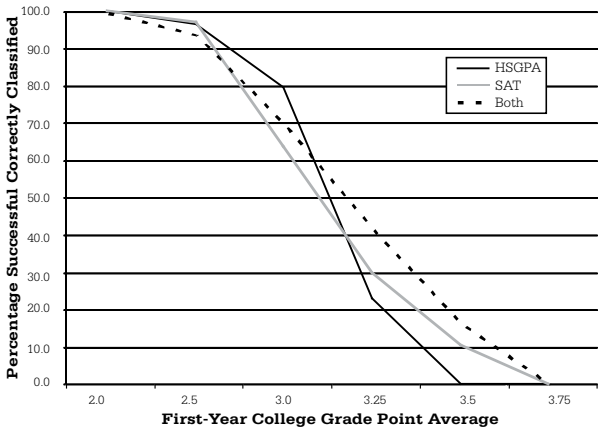

Figure 6. Accuracy rates for successful Asian American students.

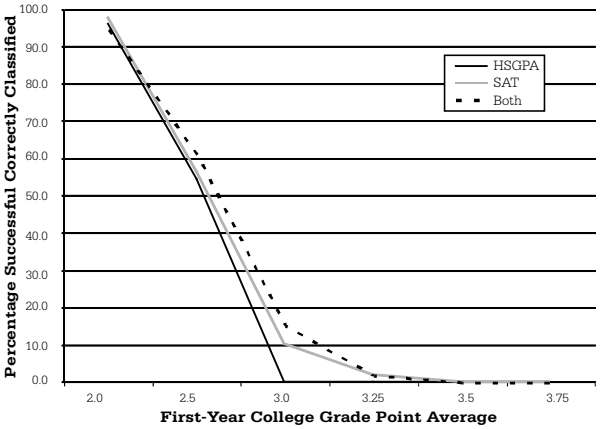

Figure 7. Accuracy rates for successful African American students.

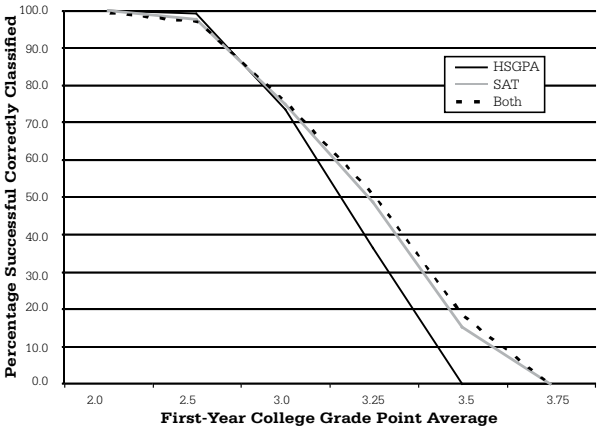

Figure 10. Accuracy rates for successful students attending very selective colleges.

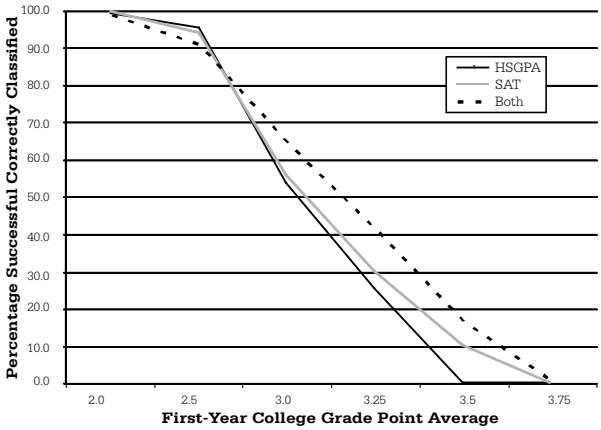

Figure 8. Accuracy rates for successful white students.

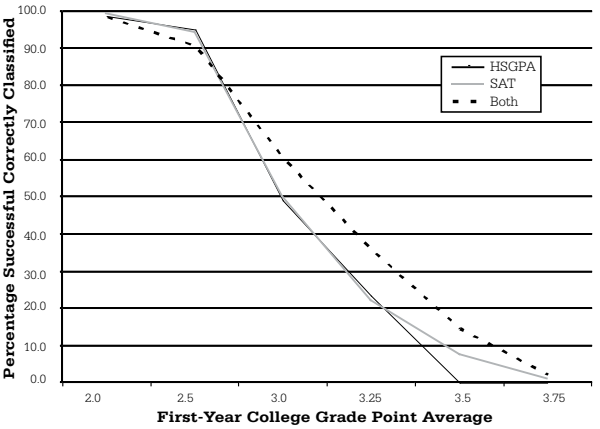

Figure 11. Accuracy rates for successful students attending moderately selective colleges.

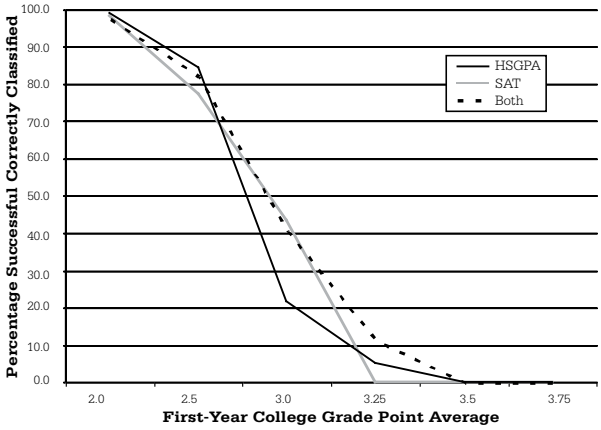

Figure 9. Accuracy rates for successful Hispanic students.

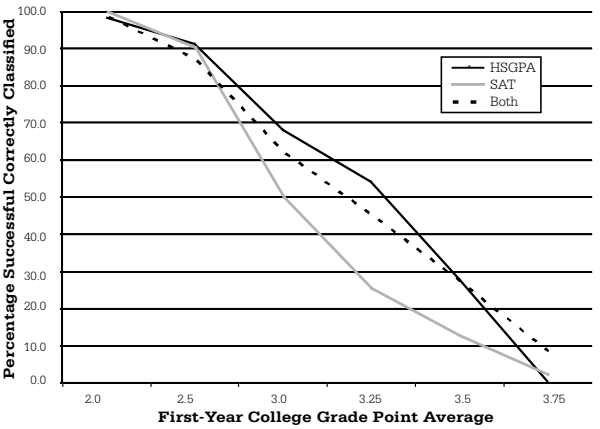

Figure 12. Accuracy rates for successful students attending least selective colleges.

students' success at the 2.5 and 3.0 levels, but both models are equally effective in predicting higher levels of success for these subgroups. Although there are variations across different racial/ethnic groups and FGPA criterion levels, HSGPA (Model 1) tends to have higher accuracy rates for predicting the unsuccessful students and the SAT (Model 2) tends to have higher accuracy rates for predicting the successful students.

Figures 10–12 show the accuracy rates for successful students by college selectivity (see Appendix Table A4 for data for unsuccessful students). For students attending the most selective colleges, Model 2 (SAT only) had accuracy rates that were equal to or higher than those for Model 1 (HSGPA only) at most FGPA criterion levels, with a few exceptions. This is the case overall, and for predicting both successful and unsuccessful students. For students attending the moderately selective colleges, the HSGPA models tended to have higher overall accuracy rates for FGPAs between 2.0 and 3.25, and for predicting the unsuccessful students at all FGPA levels. For students attending the least selective colleges, the HSGPA models had accuracy rates that were slightly greater than or equal to those for the SAT models. At the least selective colleges, the HSGPA models had higher accuracy rates for predicting successful students at most FGPA levels, and the SAT models had higher accuracy rates for predicting the unsuccessful students at the 3.0 through 3.5 FGPA criterion.

Conclusion

This study employed logistic regression to predict the probability that a student would be successful in achieving a FGPA at various levels, based on that student's SAT scores and high school grade point average. The main hypothesis under study was that the SAT would be better than HSGPA in predicting high levels of college success, because the SAT measures cognitive performance while HSGPA measures both cognitive and noncognitive factors; and cognitive achievement is reflected more in high FGPAs than in lower FGPAs. The key findings in this study were as follows:

- Across all demographic groups with one exception, at the two highest levels of success (i.e., FGPAs greater than or equal to 3.5 and 3.75), the SAT was an equally effective or a slightly better predictor of college success than HSGPA. For the least selective colleges, HSGPA was a slightly better predictor at the 3.5 level. The difference was most noticeable for the African American subgroup (i.e., at the 3.5 level the SAT had a 94.8 accuracy rate, compared to 79.7 for HSGPA).
- In the total sample, at all success-criterion levels except the 2.5 level, the SAT was equal to or slightly more accurate than HSGPA in predicting successful students, but generally less accurate than HSGPA in predicting unsuccessful students. However, at the highest FGPA level (3.75 or higher), neither the SAT nor HSGPA was able to predict successful students.
- The SAT was a better predictor of successful females at moderately high FGPA levels (3.25 and 3.5) than HSGPA. The SAT was a better predictor of successful males at all but two criterion levels (3.0 and 3.75).
- The SAT was a better predictor of successful African American students when the FGPA criterion level was between 2.0 and 3.25. At the highest two levels of success, the SAT and HSGPA were not able to predict any of the successful students. This may be a function of the small number of students and a lack of variability of scores at these achievement levels.
- Across all racial/ethnic groups, with the exception of those indicating their racial/ethnic group as "other," the SAT was typically a better predictor of successful students, and HSGPA was typically a better predictor of unsuccessful students.
- For students attending the most selective colleges, the SAT was more effective than or equally effective as HSGPA in predicting success at nearly all FGPA criterion levels. However, for students attending the least selective colleges, HSGPA tended to be a better predictor of success as compared to the SAT.

These findings do provide some evidence supporting the hypothesis under study. The SAT was found to be as good as or better than HSGPA in predicting high levels of college success. However, there are some caveats that should be noted when interpreting the results of these analyses. Because all of the students in the sample were admitted to college, these students were of higher ability than the population of college-bound seniors that take the SAT each year. It would be preferable to have a sample that included not only students who attended college, but also students who applied but were not admitted to college, and students who were admitted to but did not attend college. These additional groups of students would provide more accurate information about the classification of successful and unsuccessful students. Future research should also include cross-validation of the prediction equations employed in this study, to determine the accuracy of the prediction equations on future samples of students.

The fact that none of the models predicted any of the successful students at the highest college performance level is problematic. Although less than 7 percent of the sample in this study achieved this high performance level, future research should focus on uncovering the reasons for this poor prediction. One possible reason for the poor prediction is a lack of comparability of FGPA within this high-performing group. Because course grades are not comparable, averaging them together yields a FGPA that

is not comparable from student to student (Willingham, Lewis, Morgan, and Ramist, 1990). Students earning high grades in college make up a very diverse group; some students may take rigorous courses in the math or science fields that have demanding requirements, while others may take courses that tend to be graded more leniently and have less strict requirements for earning a high grade. Future research will focus on predicting individual course grades in the first year of college rather than FGPA. Because institutions differ substantially in their course offerings and grading policies, prediction equations will be performed by each institution, and then aggregated across institution using meta-analytic techniques. This research may uncover differences in prediction according to the type of course, as well as differences between institutions in the same type of course.

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Appendix

Table A1

Accuracy Rates for Logistic Regression Models for Total Sample

Success-Criterion Level for FGPA	*Logistic Regression Model*	*Accuracy Rate Overall*	*Accuracy Rate Successful*	*Accuracy Rate Unsuccessful*
2.0	1. HSGPA Only	87.0	99.3	3.6
	2. SAT Only	87.1	100.0	0.2
	3. SAT & HSGPA	87.0	99.3	3.8
2.5	1. HSGPA Only	72.4	95.3	20.0
	2. SAT Only	71.4	93.3	21.4
	3. SAT & HSGPA	73.7	90.5	35.5
3.0	1. HSGPA Only	67.5	52.7	78.9
	2. SAT Only	66.2	54.8	75.1
	3. SAT & HSGPA	69.7	62.3	75.3
3.25	1. HSGPA Only	73.8	24.7	93.8
	2. SAT Only	73.8	26.9	93.0
	3. SAT & HSGPA	75.7	38.5	90.9
3.5	1. HSGPA Only	83.3	0.0	100.0
	2. SAT Only	83.6	9.0	98.5
	3. SAT & HSGPA	84.0	15.5	97.7
3.75	1. HSGPA Only	93.3	0.0	100.0
	2. SAT Only	93.3	0.0	100.0
	3. SAT & HSGPA	93.3	0.0	100.0

Table A2

Accuracy Rates for Logistic Regression Models by Gender

FGPA Criterion Level	*Model 1: HSGPA Only*	*Model 2: SAT Only*	*Model 3: SAT & HSGPA*	*Model 1: HSGPA Only*	*Model 2: SAT Only*	*Model 3: SAT & HSGPA*	*Model 1: HSGPA Only*	*Model 2: SAT Only*	*Model 3: SAT & HSGPA*
	Females: Overall			*Females: Successful*			*Females: Unsuccessful*		
2.0	89.6	89.8	89.6	99.6	100.0	99.6	2.9	0.6	2.1
2.5	75.1	75.1	76.6	96.4	94.8	93.2	16.1	20.7	30.8
3.0	66.1	67.0	69.3	78.4	62.5	67.4	55.1	71.0	71.0
3.25	71.6	72.7	74.4	24.4	33.4	42.1	93.2	90.7	89.1
3.5	82.2	82.5	83.0	0.0	11.2	16.2	100.0	97.9	97.4
3.75	93.3	93.3	93.3	0.0	0.0	0.4	100.0	100.0	100.0
	Males: Overall			*Males: Successful*			*Males: Unsuccessful*		
2.0	83.9	84.0	84.0	99.1	99.9	98.8	4.1	0.6	6.0
2.5	70.0	68.2	70.8	81.6	87.7	86.3	48.3	32.0	42.0
3.0	69.3	67.9	71.2	50.6	47.0	56.8	81.4	81.5	80.7
3.25	76.2	76.2	77.8	25.0	27.0	36.7	94.5	93.9	92.4
3.5	84.5	84.7	85.3	0.0	9.1	16.1	100.0	98.6	98.0
3.75	93.4	93.4	93.4	0.0	0.0	0.0	100.0	100.0	100.0

Table A3

Accuracy Rates for Logistic Regression Models by Racial/Ethnic Group

FGPA Criterion Level	*Model 1: HSGPA Only*	*Model 2: SAT Only*	*Model 3: SAT & HSGPA*	*Model 1: HSGPA Only*	*Model 2: SAT Only*	*Model 3: SAT & HSGPA*	*Model 1: HSGPA Only*	*Model 2: SAT Only*	*Model 3: SAT & HSGPA*
	Native American: Overall			*Native American: Successful*			*Native American: Unsuccessful*		
2.0	81.5	81.5	81.5	100.0	100.0	100.0	0.0	0.0	0.0
2.5	57.0	62.6	63.4	77.0	74.3	76.4	31.6	47.9	47.0
3.0	69.4	70.2	71.3	0.0	13.6	22.2	100.0	95.1	92.9
3.25									
3.5									
3.75									
	Asian American: Overall			*Asian American: Successful*			*Asian American: Unsuccessful*		
2.0	89.1	89.1	89.1	100.0	100.0	99.8	0.5	0.0	1.6
2.5	74.6	74.1	75.9	96.4	97.0	93.9	14.8	11.3	26.5
3.0	64.8	64.3	68.9	79.5	63.8	69.9	50.5	64.8	67.9
3.25	68.3	68.3	71.2	22.9	29.7	41.8	92.2	88.5	86.7
3.5	79.7	80.1	80.3	0.0	10.2	16.4	100.0	97.9	96.6
3.75	92.0	92.0	92.0	0.0	0.0	0.0	100.0	100.0	100.0
	African American: Overall			*African American: Successful*			*African American: Unsuccessful*		
2.0	74.2	74.4	74.0	98.0	99.5	96.6	4.4	0.9	8.0
2.5	74.6	61.0	63.2	55.4	57.5	62.3	69.2	64.3	64.1
3.0	64.8	79.1	79.8	0.0	10.3	15.5	100.0	98.2	97.7
3.25	68.3	88.2	88.2	0.0	1.9	1.9	100.0	99.7	99.7
3.5	79.7	94.8	94.7	0.0	0.0	0.0	100.0	100.0	99.9
3.75	92.0	92.0	98.2	0.0	0.0	0.0	100.0	100.0	99.9
	Hispanic: Overall			*Hispanic: Successful*			*Hispanic: Unsuccessful*		
2.0	81.8	82.1	82.1	99.0	99.8	98.4	3.5	1.0	7.6
2.5	67.5	65.6	70.1	77.8	85.1	82.8	51.2	34.7	50.1
3.0	69.8	68.0	71.3	43.7	21.9	41.0	83.3	91.9	87.0
3.25	80.3	80.8	81.0	0.0	5.1	11.4	100.0	99.3	98.1
3.5	89.0	89.0	89.0	0.0	0.0	0.0	100.0	100.0	100.0
3.75	96.6	96.6	96.6	0.0	0.0	0.0	100.0	100.0	100.0
	White: Overall			*White: Successful*			*White: Unsuccessful*		
2.0	88.1	88.1	88.1	99.5	100.0	99.4	3.5	0.2	3.8
2.5	73.8	72.4	74.8	95.7	94.2	91.5	19.7	18.8	33.5
3.0	67.6	65.7	69.6	53.7	55.9	65.0	78.9	73.8	73.3
3.25	73.1	73.1	75.2	25.4	30.0	41.7	93.7	91.7	89.6
3.5	82.5	82.8	83.4	0.0	10.0	16.9	100.0	98.2	97.5
3.75	92.9	92.9	93.0	0.0	0.0	0.8	100.0	100.0	100.0
	Other: Overall			*Other: Successful*			*Other: Unsuccessful*		
2.0	87.6	87.4	87.4	99.1	99.8	99.2	6.5	0.0	4.3
2.5	74.0	73.0	74.6	94.5	95.9	92.7	21.5	14.8	28.7
3.0	65.9	63.8	68.2	70.4	59.3	64.7	61.8	67.9	71.3
3.25	69.9	69.9	74.4	53.5	34.3	49.6	78.4	88.5	87.3
3.5	81.8	80.4	82.6	30.1	11.0	29.5	94.5	97.5	95.6
3.75									

Note: Data for subgroups with fewer than 50 cases are not shown.

Table A4

Accuracy Rates for Logistic Regression Models by College Selectivity

FGPA Criterion Level	*Model 1: HSGPA Only*	*Model 2: SAT Only*	*Model 3: SAT & HSGPA*	*Model 1: HSGPA Only*	*Model 2: SAT Only*	*Model 3: SAT & HSGPA*	*Model 1: HSGPA Only*	*Model 2: SAT Only*	*Model 3: SAT & HSGPA*
	Very Selective: Overall			*Very Selective: Successful*			*Very Selective: Unsuccessful*		
2.0	93.9	93.9	93.8	100.0	100.0	99.8	0.3	0.0	1.4
2.5	80.8	80.7	81.1	99.4	97.7	97.4	3.6	10.3	13.3
3.0	61.4	68.0	68.9	73.7	75.0	75.8	46.1	59.3	60.3
3.25	64.2	69.4	70.5	36.3	48.8	50.7	81.7	82.4	83.0
3.5	77.6	78.2	78.6	0.0	15.3	18.6	100.0	96.3	95.8
3.75	91.4	91.4	91.4	0.0	0.0	0.0	100.0	100.0	100.0
	Moderately Selective: Overall			*Moderately Selective: Successful*			*Moderately Selective: Unsuccessful*		
2.0	87.3	87.3	87.2	99.5	100.0	99.4	3.3	0.1	3.7
2.5	72.6	71.7	74.0	95.8	95.0	91.6	18.6	17.4	32.9
3.0	66.9	63.8	68.5	49.6	50.5	61.1	80.4	74.1	74.3
3.25	74.4	73.4	75.6	23.7	22.2	36.2	94.7	93.9	91.4
3.5	83.9	84.1	84.7	0.0	7.5	14.9	100.0	98.8	98.2
3.75	93.9	94.0	94.0	0.0	1.1	2.4	100.0	100.0	99.9
	Least Selective: Overall			*Least Selective: Successful*			*Least Selective: Unsuccessful*		
2.0	84.5	84.9	84.7	98.1	100.0	98.9	7.7	0.3	4.9
2.5	71.6	68.4	72.5	91.2	90.4	87.3	33.0	25.1	43.5
3.0	71.1	68.5	72.7	67.8	50.1	62.2	73.4	81.1	79.9
3.25	76.8	75.6	78.8	53.9	25.3	45.2	85.2	94.0	91.1
3.5	84.9	84.0	85.6	27.4	12.5	27.4	96.1	97.9	96.9
3.75	92.7	92.7	93.0	0.0	2.0	8.4	100.0	99.8	99.7

Note: Very Selective N=5,922, Moderately Selective N=20,122, and Least Selective N=4,261.


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