CollegeBoard

A Case for Not Going SAT-Optional: Students with Discrepant SAT and HSGPA Performance

American Educational Research Association

Denver, Colorado

May 3rd, 2010

Krista D. Mattern, Emily J. Shaw & Jennifer L. Kobrin

Introduction

- Academic indicators, such as high school grades and standardized test scores, are among the most commonly used criteria for college admission (NACAC, 2008).

- However, there is a long standing debate over the utility and proper use of test scores and whether or not they should even be required for college admission (e.g., Geiser & Studley, 2002).

- Many feel that the information provided by SAT scores beyond that provided by high school grade point average (HSGPA) does not outweigh its cost, especially if they provide redundant information (NACAC, 2008).

CollegeBoard

Does the SAT add anything?

- The incremental validity of the SAT over HSGPA was 0.08 (Kobrin, Patterson, Shaw, Mattern, and Barbuti, 2008).

- Bridgeman, Pollack, and Burton (2004) demonstrated that the seemingly very small increase in explained variance in FYGPA offered by the SAT after HSGPA is taken into account is actually quite meaningful when you look at the percent of students who succeed rather than the increment in r-squared.

  - Straightforward approach

Straightforward Approach

Percentage of Students Earning a Cumulative College GPA of 3.5 of higher: Incremental Validity of the SAT
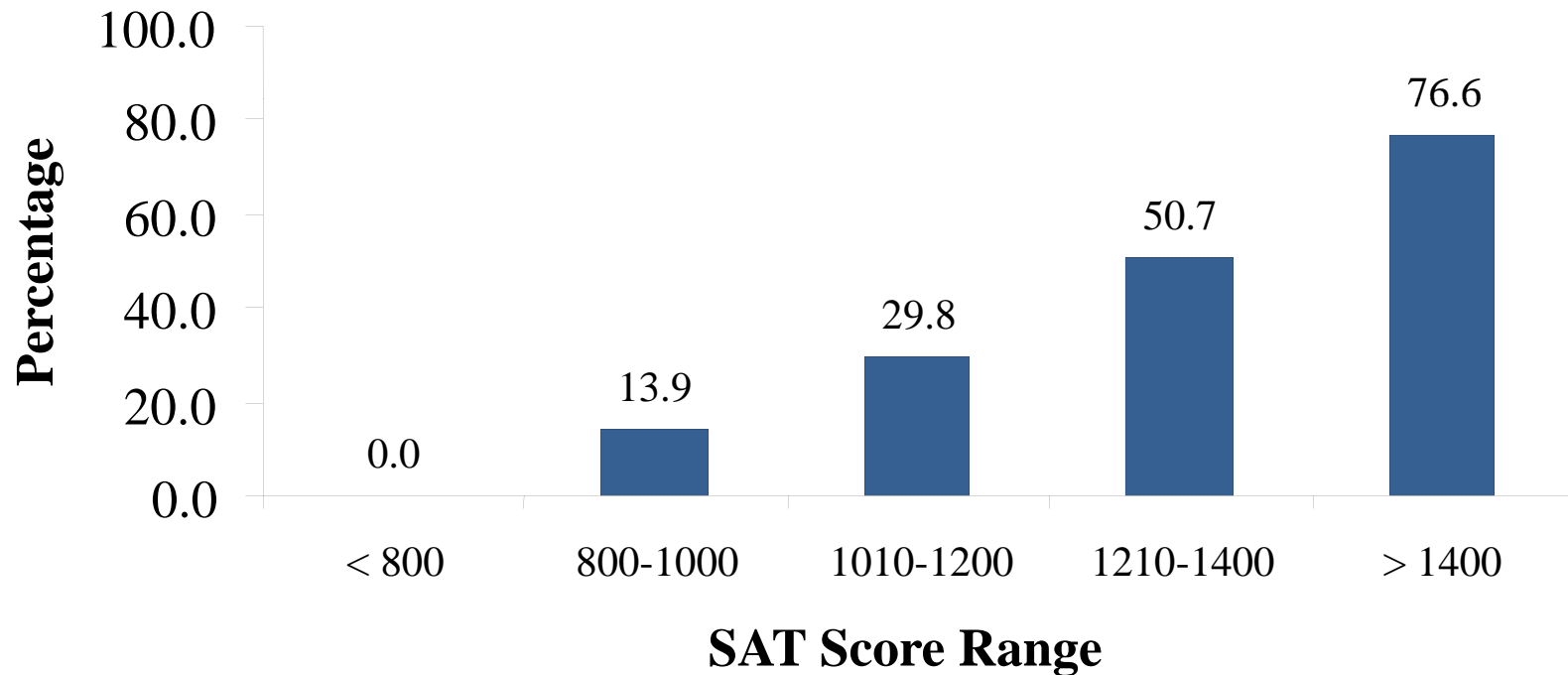
Discrepant HSGPA-SAT Performance

In Kobrin, Camara, & Milewski (2002), students were divided into three groups based on the difference between their standardized HSGPA and SAT scores.

- 16% higher HSGPA, 16% higher SAT score, & 68% Nondiscrepant

Demographic Characteristics

- Female, Black, Asian, and Hispanic students comprised a larger % of the higher HSGPA group than the other two groups.

Predictive Validity

- SAT scores were more predictive of FYGPA than was HSGPA for the higher HSGPA group.

CollegeBoard

Current Study

Purpose is to examine:

- The frequency of students with discrepant HSGPA and SAT performance (difference $\geq$ 1 SD) for the new SAT.
- Whether certain students are disproportionately more likely to exhibit discrepant performance.
- Among those with discrepant performance, which measure is more indicative of college performance?
    - Differential prediction of the SAT and HSGPA by discrepant group.

Sample:

- The College Board collected data on nearly 200,000 first-time, first-year students from 110 institutions for the 2006 academic school year.
    - Students who had an SAT score, self-reported HSGPA, and a valid FYGPA were included in analyses (N = 150,377).

Measures

SAT scores

- Official SAT scores were obtained from College Board records. The SAT is comprised of three sections, Critical Reading, Math, and Writing, and the score scale ranges from 200 to 800 for each section.

SAT Questionnaire Responses

- Obtained from College Board records, HSGPA, demographic information, and high school course work were self-reported and obtained from responses to the SAT Questionnaire, which is completed during registration for the SAT.

College Performance

- First-year GPA and second year retention data were provided by the participating institutions.

Procedure

Similar to Kobrin et al., 2002, students were divided into three groups based on the difference between their standardized HSGPA and SAT scores.

1. Both SAT total scores and HSGPA were standardized

2. The standardized HSGPA value was subtracted from the standardized SAT score

3. Students with a difference score:

   - less than or equal to -1.00 were categorized as higher HSGPA

   - greater than -1.00 but less than 1.00 were categorized as Nondiscrepant

   - greater than or equal to 1.00 were categorized as higher SAT

Distribution of Students
by SAT-HSGPA Discrepant Groups

Discrepant Groups	Frequency	Percent
Higher HSGPA	26,094	17.4
Nondiscrepant	98,025	65.2
Higher SAT	26,258	17.5
Total	150,377	100.0

CollegeBoard

connect to college success™
www.collegeboard.com

Characteristics of Discrepant Students

Subgroup		Higher HSGPA		Nondiscrepant		Higher SAT	
		n	%	n	%	n	%
Gender	Female	17,116	65.6	53,503	54.6	10,420	39.7
	Male	8,978	34.4	44,522	45.4	15,838	60.3
Ethnicity	American Indian	164	0.6	495	0.5	135	0.5
	Asian	2,396	9.2	8,619	8.8	3,043	11.6
	Black	2,866	11.0	6,021	6.1	1,356	5.2
	Hispanic	3,215	12.3	6,226	6.4	1,158	4.4
	White	15,754	60.4	69,562	71.0	18,191	69.3
	Other	800	3.1	2,819	2.9	857	3.3
	No Response	899	3.4	4,283	4.4	1,518	5.8

Characteristics of Discrepant Students

Subgroup		Higher HSGPA		Nondiscrepant		Higher SAT	
		n	%	n	%	n	%
Parental Income	Less than $30,000	3,597	13.8	6,322	6.4	1,143	4.4
	$30,000–$50,000	3,624	13.9	8,889	9.1	1,690	6.4
	$50,000–$70,000	3,459	13.3	10,721	10.9	2,092	8.0
	$70,000–$100,000	4,556	17.5	17,280	17.6	3,912	14.9
	More than $100,000	3,845	14.7	23,258	23.7	8,014	30.5
	No Response	7,013	26.9	31,555	32.2	9,407	35.8
Highest Parental Education	No High School Diploma	1,002	3.8	1,390	1.4	222	0.8
	High School Diploma	8,140	31.2	18,707	19.1	3,328	12.7
	Associate's Degree	2,385	9.1	6,259	6.4	1,010	3.8
	Bachelor's Degree	7,925	30.4	33,749	34.4	8,049	30.7
	Graduate Degree	5,402	20.7	33,196	33.9	12,198	46.5
	No Response	1,240	4.8	4,724	4.8	1,451	5.5

Performance on Academic Measures by SAT-HSGPA Discrepant Groups

Variable	Higher HSGPA		Nondiscrepant		Higher SAT	
	Mean	SD	Mean	SD	Mean	SD
SAT total	1468	177	1705	231	1871	247
SAT-CR	480	71	564	87	626	93
SAT-M	509	79	583	91	632	93
SAT-W	479	70	558	87	614	94
HSGPA	3.94	0.31	3.63	0.45	3.16	0.54
HS Rigor	2.24	1.85	2.98	2.07	3.30	2.11
FYGPA	2.91	0.69	3.01	0.69	2.90	0.76
Retention	86.8	33.8	88.3	32.2	86.4	34.3

FYGPA of SAT-HSGPA Discrepant Groups by HSGPA
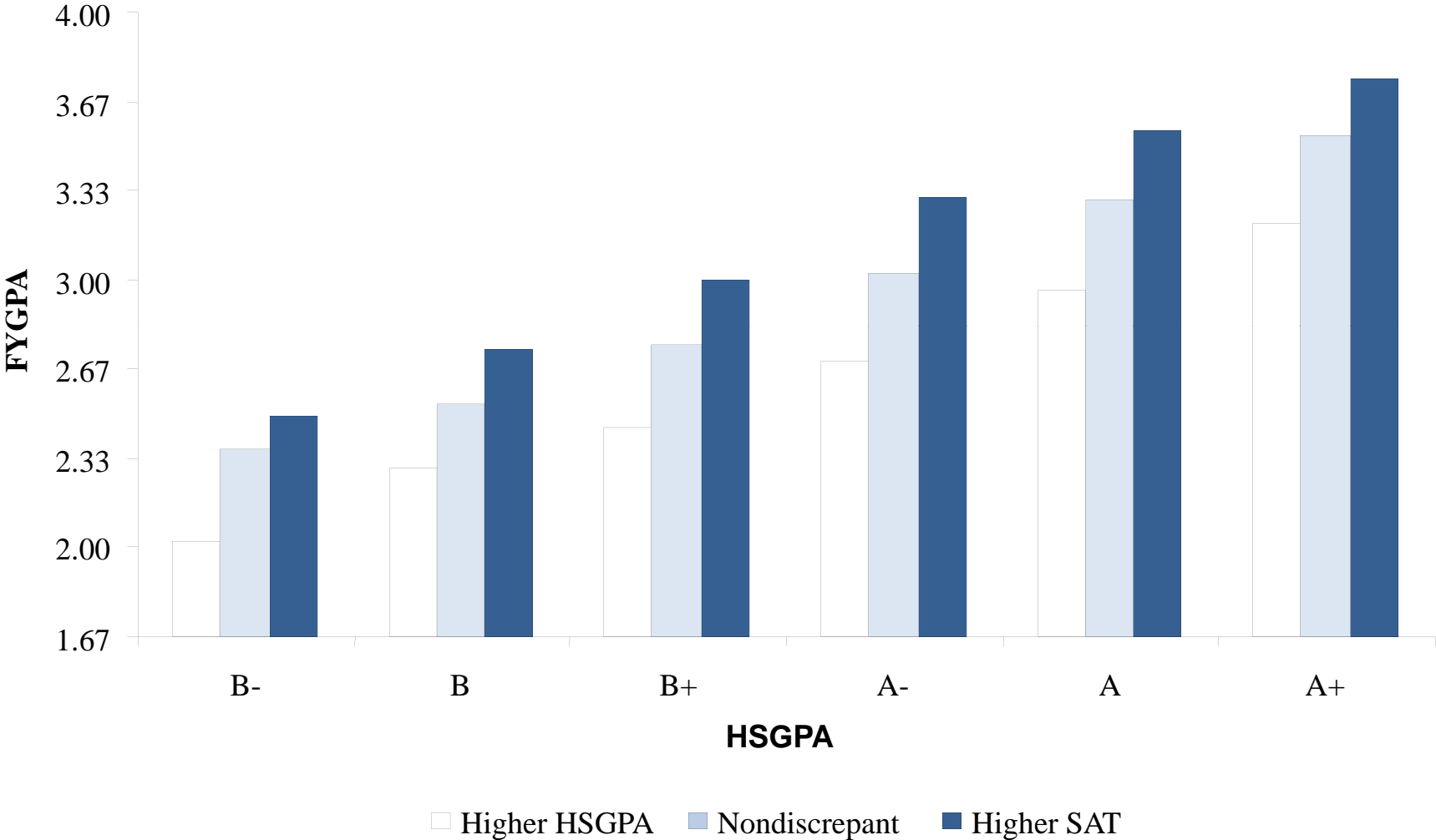
Average Overprediction (-) and Underprediction (+) of FYGPA for HSGPA and SAT by SAT-HSGPA Discrepant Groups

Error

0.30

0.20 — 0.19

0.13

0.10 — 0.02 — 0.02 — 0.01

0.00

HSGPA — SAT — SAT+HSGPA

-0.02 — -0.03

-0.10

-0.20 — -0.21

-0.26

-0.30

Predictor(s)
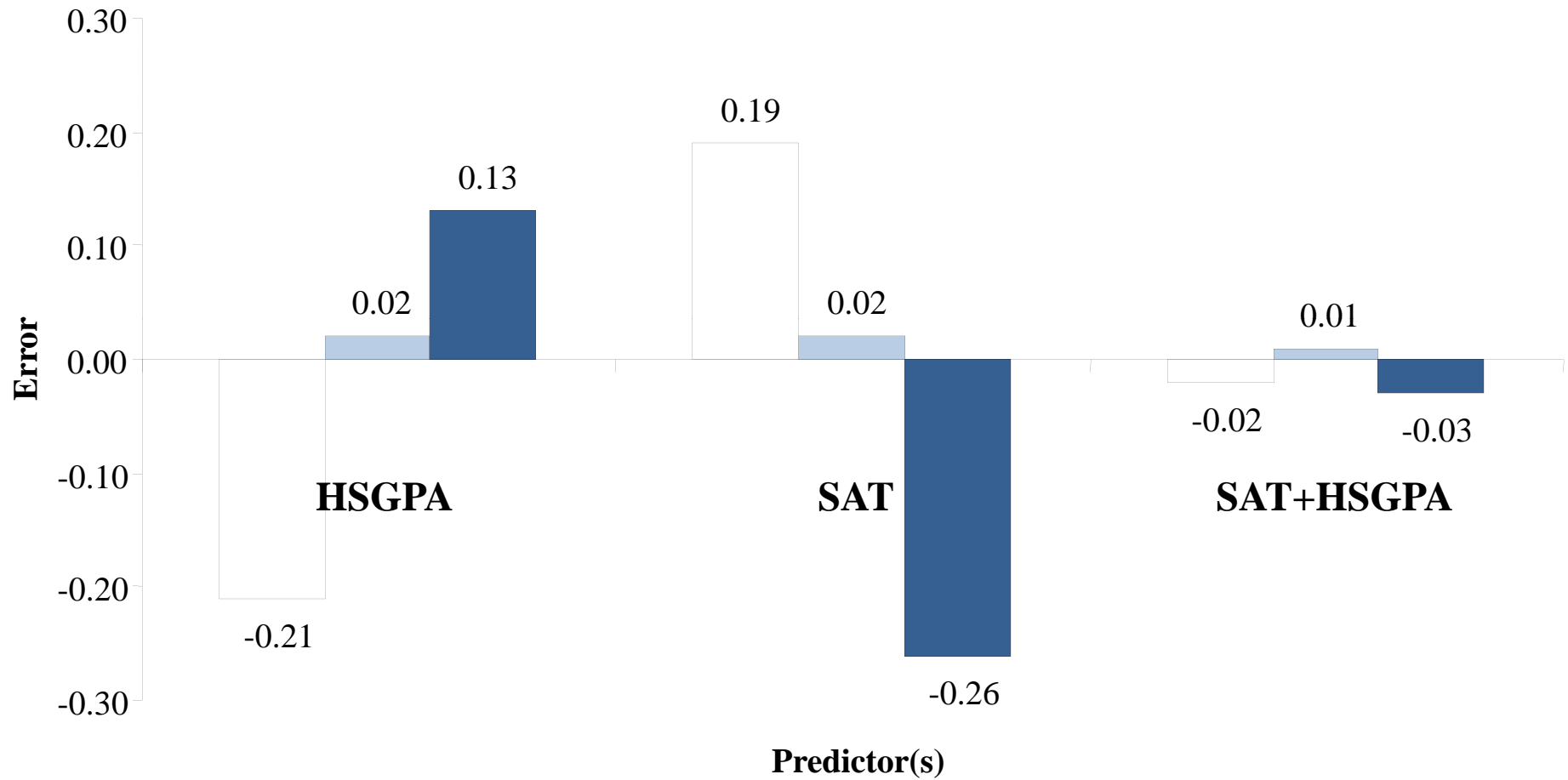
☐ Higher HSGPA ☐ Nondiscrepant ■ Higher SAT

Summary

- Over one-third of students exhibited discrepant performance.

- Using only HSGPA for admission under-predicted college performance for those students who performed significantly higher on the SAT as compared to HSGPA.

- Results underscore the utility of using both HSGPA and test scores for admission decisions.

References

Bridgeman, B., Pollack, J., & Burton, N. (2007). *Understanding what SAT Reasoning Test scores add to high school grades: A straightforward approach*. (College Board Research Report No. 2004-4). New York: The College Board.

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,* 1-26.

Kobrin, J., Camara, W. J., & Milewski, G. (2002). *Students with Discrepant High School GPA and SAT I Scores.* (College Board Research Note RN-15). New York: The College Board.

Kobrin, J. L., Patterson, B. F., Shaw, E. J., Mattern, K. D., & Barbuti, S. M. (2008). *Validity of the SAT for Predicting First-Year College Grade Point Average*. (College Board Research Report No. 2008-5). New York: The College Board.

National Association for College Admission Counseling. (2008). *State of College Admission, 2008*. Alexandria, VA: NACAC.

Thank You!

- Researchers are encouraged to freely express their professional judgment. Therefore, points of view or opinions stated in College Board presentations do not necessarily represent official College Board position or policy.

- Access this presentation online at http://professionals.collegeboard.com/data-reports-research/cb/presentations

- Please forward any questions, comments, and suggestions to Krista Mattern at: kmattern@collegeboard.org