

# Statistical Report

---

Research and Development

Statistical Report No. 2011-3

---

## Validity of the SAT for Predicting Third-Year Grades: 2006 SAT Validity Sample

Krista D. Mattem & Brian F. Patterson

The College Board

The College Board

New York, NY

---

## Executive Summary

The College Board formed a research consortium with four-year colleges and universities to build a national higher education database with the primary goal of validating the SAT, which is used in college admission and consists of three sections: critical reading (SAT-CR), mathematics (SAT-M) and writing (SAT-W). This report builds on a body of evidence that confirms that SAT scores are predictive of multiple indicators of college performance (e.g., first-year grade point average, Kobrin et al., 2008; retention, Mattern & Patterson, 2009; second-year grades, Mattern & Patterson, 2010) by demonstrating a strong link between SAT scores and grades earned through the third year of college.

This report presents the validity of the SAT for predicting two third-year college outcomes: (1) third-year cumulative GPA (3<sup>rd</sup> Yr Cum GPA), and (2) third-year grade point average (3<sup>rd</sup> Yr GPA). Similar to the results for first- and second-year outcomes (1<sup>st</sup> Yr GPA, 2<sup>nd</sup> Yr GPA, 2<sup>nd</sup> Yr Cum GPA), the SAT is strongly correlated with third year outcomes overall and by institutional (control, selectivity, size) and student (gender, race/ethnicity, best language) characteristics. Detailed results are provided below. Results are based on data on over 60,000 students across 60 institutions (see Appendix A for a list of participating institutions).

### Definitions

1. **First-year grade point average (1<sup>st</sup> Yr GPA)** – Average of grades earned in courses during the student's first year of college.
2. **Second-year grade point average (2<sup>nd</sup> Yr GPA)** – Average of grades earned in courses during the student's second year of college.
3. **Third-year grade point average (3<sup>rd</sup> Yr GPA)** – Average of grades earned in courses during the student's third year of college.
4. **Third-year cumulative grade point average (3<sup>rd</sup> Yr Cum GPA)** – Average of grades earned in courses throughout the student's three years of college.

### References

- College Board. (2006). 2006 College-Bound Seniors: Total Group Profile Report. New York, NY: 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 Rep. No. 2008-5). New York, NY: The College Board.
- Mattern, K. D. & Patterson, B. F. (2009). Is Performance on the SAT® Related to College Retention? (College Board Research Rep. No. 2009-7). New York, NY: The College Board.
- Mattern, K. D. & Patterson, B. F. (2010). Validity of the SAT® for Predicting Second-Year Grades: 2006 SAT Validity Sample (College Board Statistical Report). New York, NY: The College Board.

Table 1  
*Institutional Characteristics*

<b>Institutional Characteristic</b>	<b>2006 Sample (Year 3)</b>	
<b>U.S. Region</b>	Midwest	12%
	Mid-Atlantic	20%
	New England	23%
	South	12%
	Southwest	10%
	West	23%
<b>Control</b>	Public	40%
	Private	60%
<b>Admittance Rate</b>	Under 50%	20%
	50 to 75%	55%
	Over 75%	25%
<b>Undergraduate Enrollment</b>	Small	18%
	Medium	40%
	Large	23%
	Very large	18%

*Note.* K = number of institutions = 60. Percentages may not sum to 100 due to rounding. Institution sizes were categorized by the number of undergraduates as follows: small = 750 to 1,999; medium = 2,000 to 7,499; large = 7,500 to 14,999; and very large = 15,000 or more.

- Of the 110 institutions from the original 2006 sample, 60 provided third-year data.
- The sample of 60 institutions was diverse with respect to region of the U.S., control, selectivity, and size.

Table 2  
*Descriptive Statistics on the Total Sample*

<b>Variable</b>	<b>M</b>	<b>SD</b>
HSGPA	3.67	0.47
SAT-CR	573	93.4
SAT-M	590	94.0
SAT-W	567	92.7
1 <sup>st</sup> Yr GPA	3.12	0.57
2 <sup>nd</sup> Yr GPA	3.13	0.61
3 <sup>rd</sup> Yr GPA	3.18	0.65
3 <sup>rd</sup> Yr Cum GPA	3.16	0.52

*Note.* N = number of students = 63,736.

- Of the original 110 institutions, 60 provided third-year data for a total of 101,440 students. Students who did not have a valid HSGPA, new SAT scores, 1<sup>st</sup> Yr GPA, 2<sup>nd</sup> Yr GPA, 3<sup>rd</sup> Yr GPA or 3<sup>rd</sup> Yr Cum GPA were removed from analyses resulting in a final sample size of 63,736.
- Similar to the previous findings, this sample of college students outperformed the population of SAT test takers who graduate high school in 2006, whose mean SAT-CR, SAT-M and SAT-W were 503, 518, and 497, respectively, (College Board, 2006).

Table 3  
*Corrected (Raw) Correlation Matrix of SAT & HSGPA*

<b>Variable</b>	<b>HSGPA</b>	<b>SAT-CR</b>	<b>SAT-M</b>	<b>SAT-W</b>
<b>HSGPA</b>	-	0.45	0.49	0.49
<b>SAT-CR</b>	(0.21)	-	0.72	0.84
<b>SAT-M</b>	(0.22)	(0.48)	-	0.72
<b>SAT-W</b>	(0.24)	(0.71)	(0.49)	-

*Note.* N = number of students = 63,736. The correlations were corrected for restriction of range within institutions and pooled across institutions; raw correlations are shown in parentheses.

- The correlations between all predictors were similar to what was found in previous research.

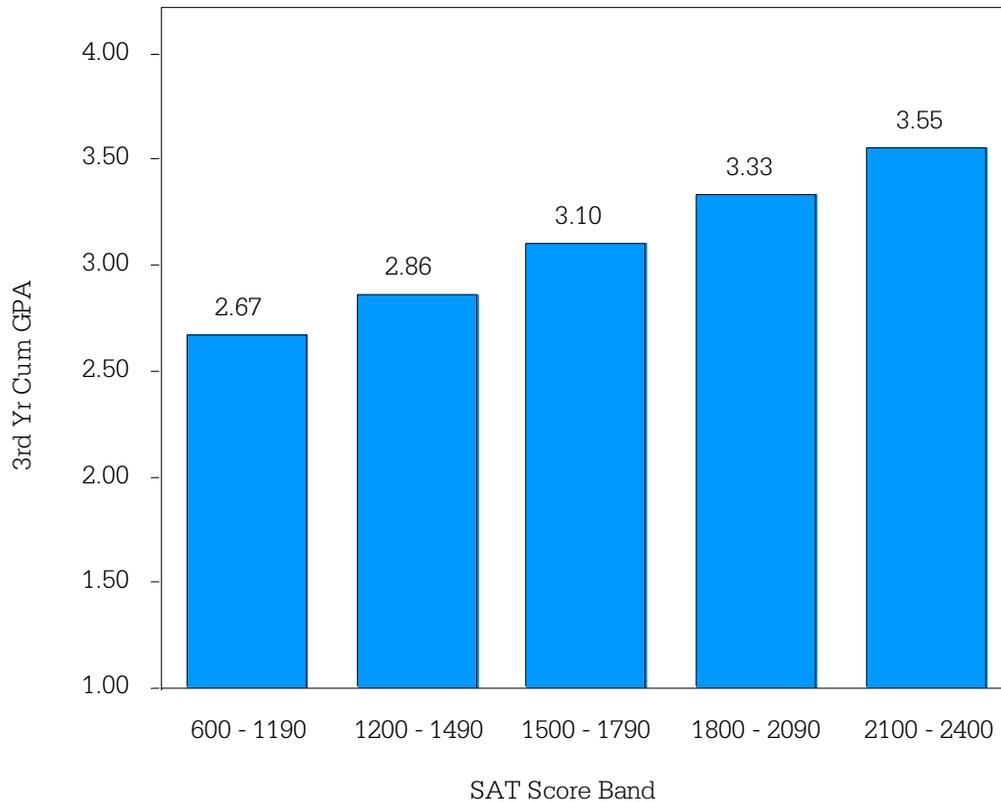
Table 4  
*Corrected (Raw) Correlations of Predictors with Third-Year Grades*

Predictor(s)	Correlation	
	3 <sup>rd</sup> Yr GPA	3 <sup>rd</sup> Yr Cum GPA
1. HSGPA	0.46 (0.29)	0.57 (0.38)
2. SAT-CR	0.40 (0.23)	0.52 (0.32)
3. SAT-M	0.38 (0.18)	0.50 (0.27)
4. SAT-W	0.43 (0.27)	0.56 (0.36)
5. SAT-M, SAT-CR	0.42 (0.24)	0.55 (0.35)
6. HSGPA, SAT-M, SAT-CR	0.51 (0.34)	0.65 (0.46)
7. SAT-CR, SAT-M, SAT-W	0.45 (0.28)	0.58 (0.39)
8. HSGPA, SAT-CR, SAT-M, SAT-W	0.52 (0.36)	0.66 (0.48)

*Note.* N = number of students = 63,736. Pooled within-institution, restriction of range corrected correlations are presented; raw correlations are shown in parentheses.

- In terms of grades earned during a single year, the corrected multiple correlation of SAT scores and HSGPA was highest for 1<sup>st</sup> Yr GPA (0.62, Kobrin et al., 2008), followed by 2<sup>nd</sup> Yr GPA (0.58, Mattern & Patterson, 2010), and lowest for 3<sup>rd</sup> Yr GPA (0.52). This result was expected because the courses students take in their first year are more similar (i.e., general education requirements) than in subsequent years when students begin taking courses in their respective major. Therefore, 1<sup>st</sup> Yr GPA is a more standardized measure of college performance than 2<sup>nd</sup> Yr GPA and 3<sup>rd</sup> Yr GPA.
- With respect to cumulative grade point average, the multiple correlation of SAT scores and HSGPA was highest for 3<sup>rd</sup> Yr Cum GPA (0.66), followed by 2<sup>nd</sup> Yr Cum GPA (0.64, Mattern & Patterson, 2010), and lowest for 1<sup>st</sup> Yr GPA (0.62, Kobrin et al., 2008). This result is also not surprising because 3<sup>rd</sup> Yr GPA is based on more courses than 2<sup>nd</sup> Yr GPA and 1<sup>st</sup> Yr GPA and, therefore, represents a more reliable measure of college performance.
- Similar to the results for 1<sup>st</sup> Yr GPA, the SAT writing section has the highest correlation with 3<sup>rd</sup> Yr GPA and 3<sup>rd</sup> Yr Cum GPA among the three sections.
- As compared to SAT scores, HSGPA was slightly more predictive of 3<sup>rd</sup> Yr GPA (0.46 versus 0.45) whereas SAT scores were slightly more predictive of 3<sup>rd</sup> Yr Cum GPA (0.58 versus 0.57).
- The incremental validity of SAT scores over HSGPA was 0.06 and 0.09 for 3<sup>rd</sup> Yr GPA and 3<sup>rd</sup> Yr Cum GPA, respectively.

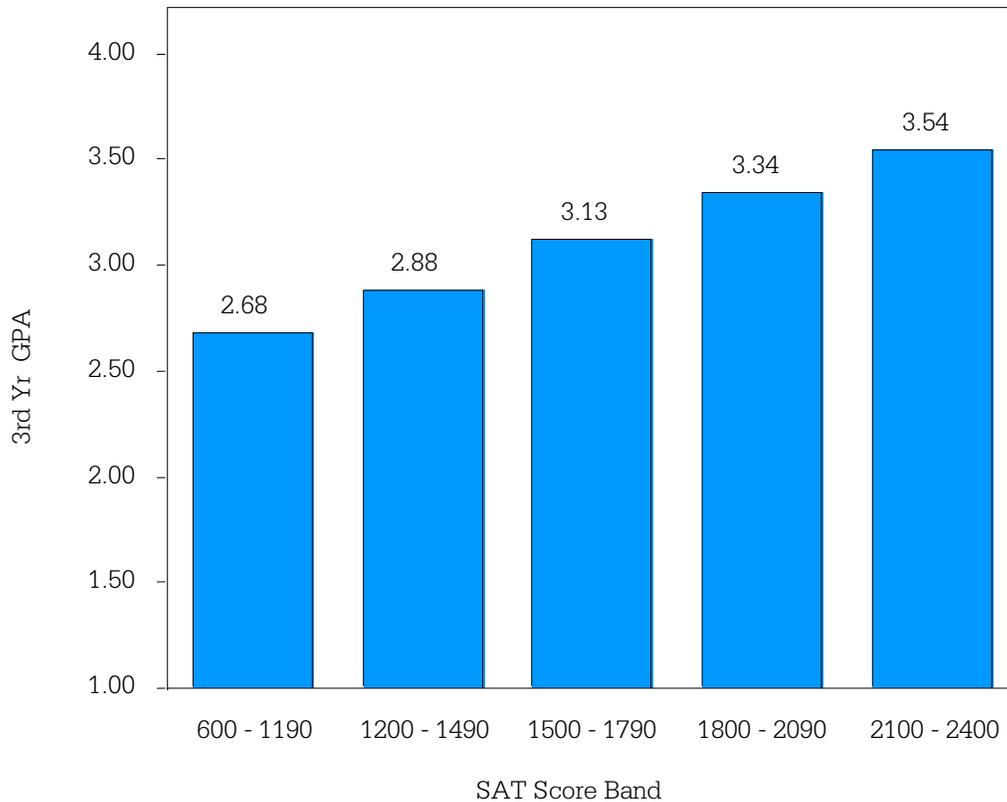
Figure 1  
*Mean 3<sup>rd</sup> Yr Cum GPA by SAT Score Band*



*Note.* SAT score bands based on the sum of SAT-CR, SAT-M, and SAT-W. The sample sizes for the five SAT score bands: 876 for 600 - 1190; 10,796 for 1200 - 1490; 26,130 for 1500 - 1790; 21,336 for 1800 - 2090; and 4,598 for 2100 - 2400.

- Figure 1 presents the mean 3<sup>rd</sup> Yr Cum GPA by SAT score band. This graphically demonstrates the strong positive relationship between SAT scores and grades earned of three years of college.

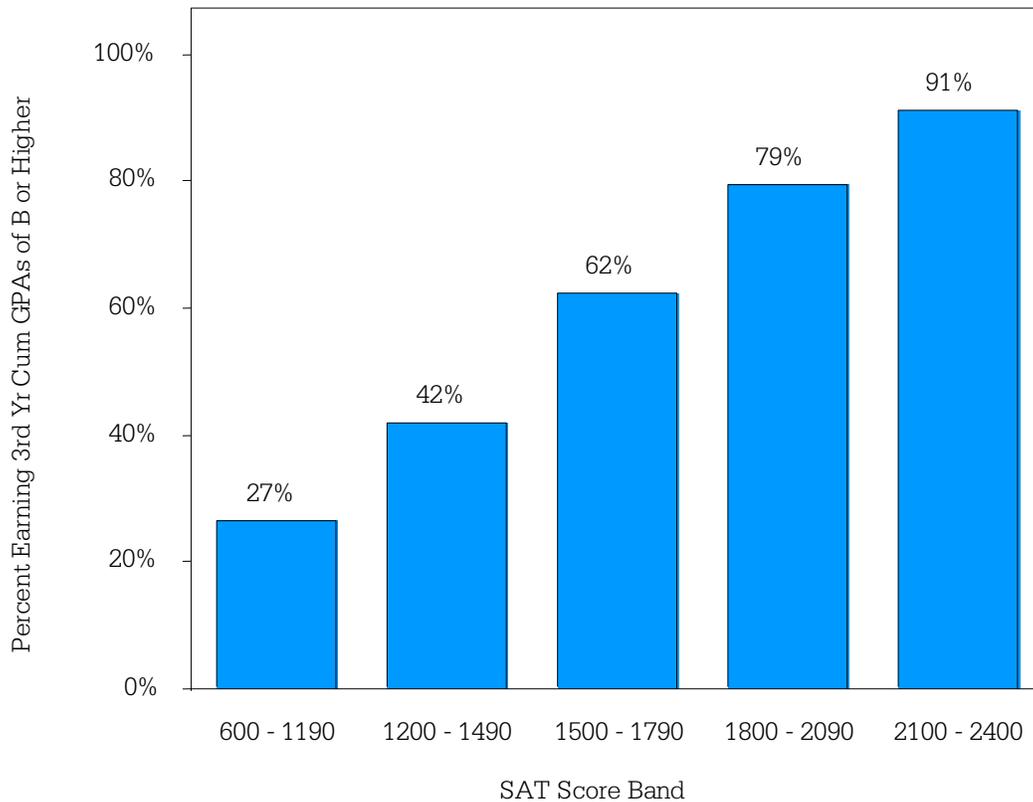
Figure 2  
*Mean 3<sup>rd</sup> Yr GPA by SAT Score Band*



*Note.* SAT score bands based on the sum of SAT-CR, SAT-M, and SAT-W. The sample sizes for the five SAT score bands: 876 for 600 - 1190; 10,796 for 1200 - 1490; 26,130 for 1500 - 1790; 21,336 for 1800 - 2090; and 4,598 for 2100 - 2400.

- Figure 2 presents the mean 3<sup>rd</sup> Yr GPA by SAT score band. This graphically demonstrates the strong positive relationship between SAT scores and grades earned in the third year of college.

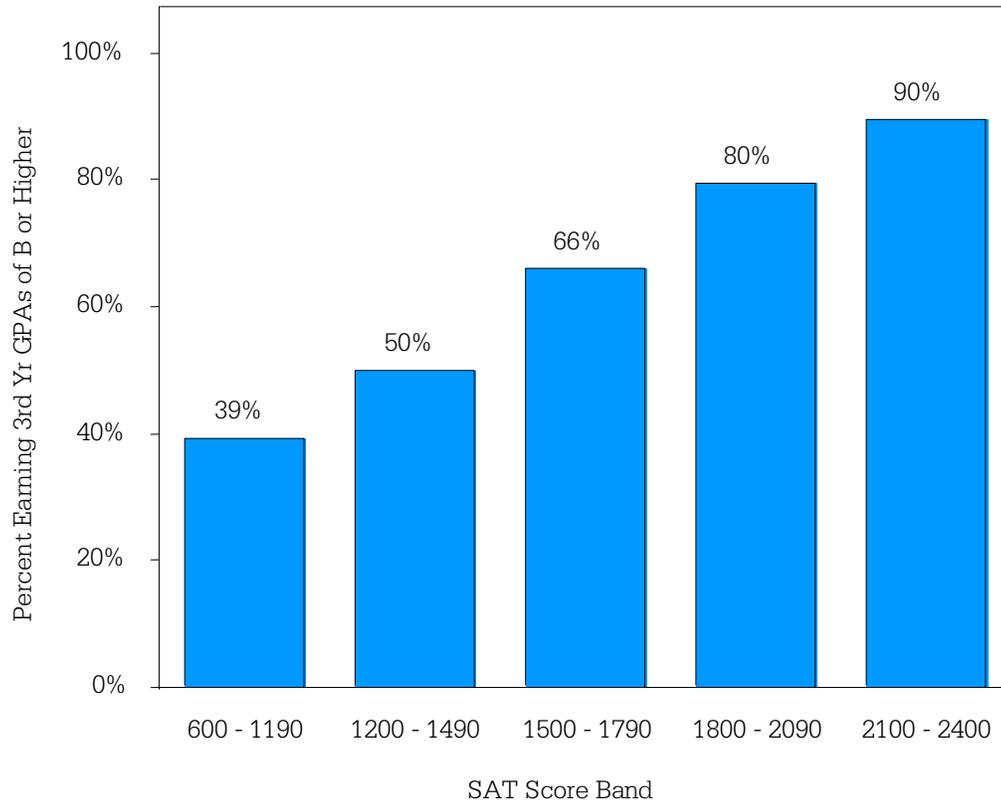
Figure 3  
*Percent of Students Earning a 3<sup>rd</sup> Yr Cum GPA of a B or Higher by SAT Score Band*



*Note.* SAT score bands based on the sum of SAT-CR, SAT-M, and SAT-W. The sample sizes for the five SAT score bands: 876 for 600 - 1190; 10,796 for 1200 - 1490; 26,130 for 1500 - 1790; 21,336 for 1800 - 2090; and 4,598 for 2100 - 2400.

- Figure 3 presents the percent of students by SAT score band who had a 3<sup>rd</sup> Yr Cum GPA of B (3.0) or higher and again the strong positive relationship between SAT scores and grades earned over three years of college is evident.

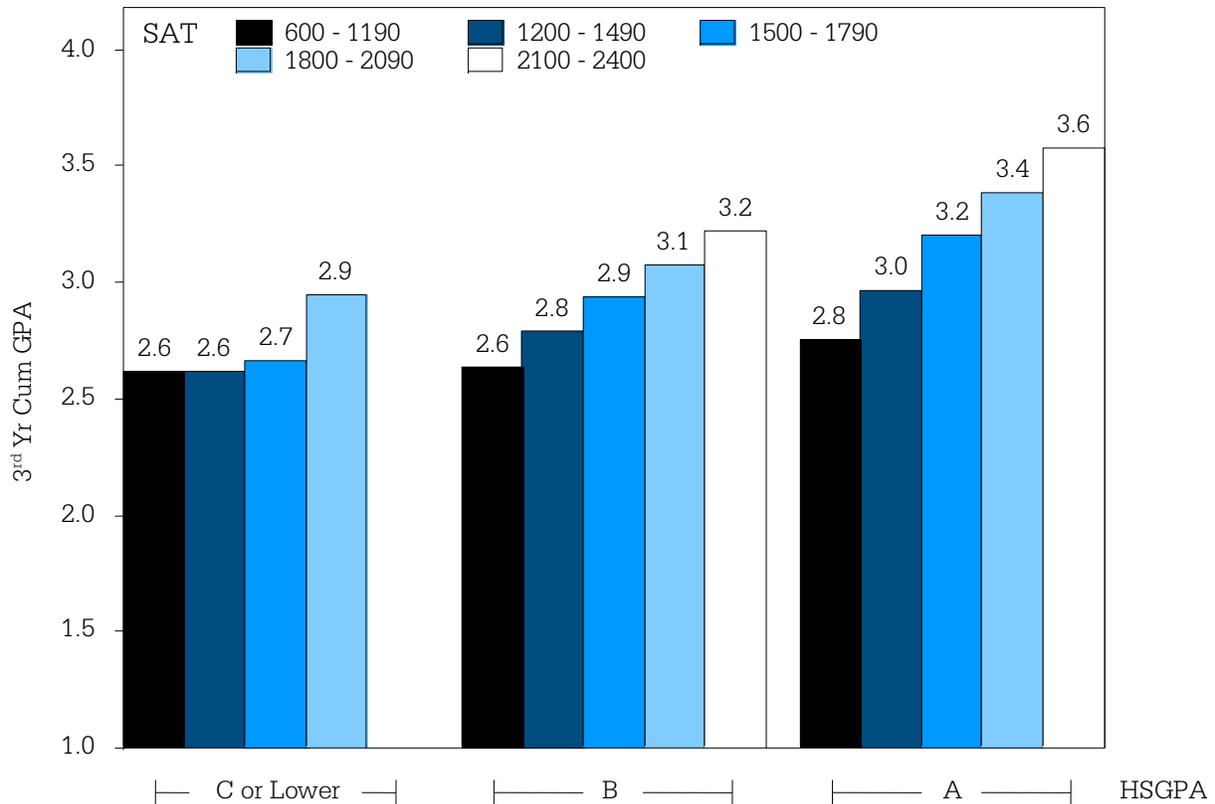
Figure 4  
*Percent of Students Earning a 3<sup>rd</sup> Yr GPA of a B or Higher by SAT Score Band*



*Note.* SAT score bands based on the sum of SAT-CR, SAT-M, and SAT-W. The sample sizes for the five SAT score bands: 876 for 600 - 1190; 10,796 for 1200 - 1490; 26,130 for 1500 - 1790; 21,336 for 1800 - 2090; and 4,598 for 2100 - 2400.

- Figure 4 presents the percent of students by SAT score band who had a 3<sup>rd</sup> Yr GPA of B (3.0) or higher and again the strong positive relationship between SAT scores and grades earned in the third year of college is evident.

Figure 5  
*Incremental Validity of the SAT: Mean 3<sup>rd</sup> Yr Cum GPA by SAT Score Band, Controlling for HSGPA*

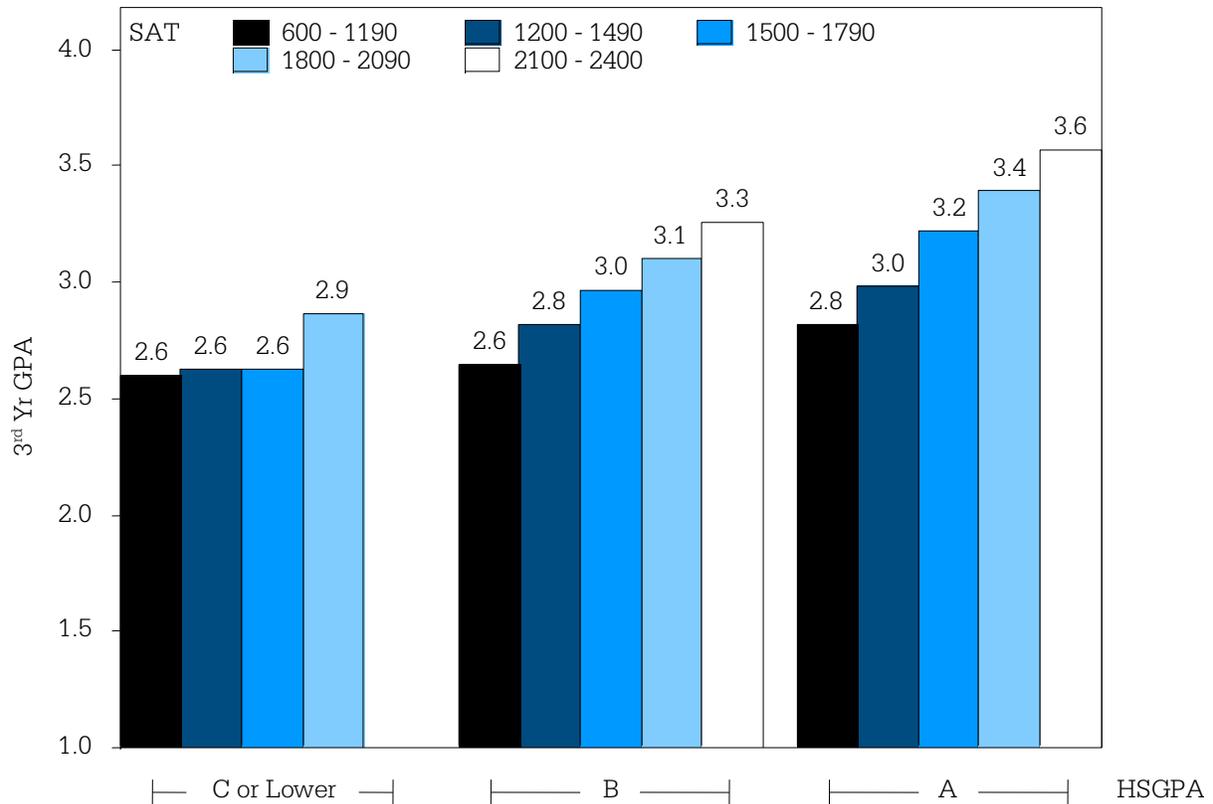


*Note.* SAT score bands based on the sum of SAT-CR, SAT-M, and SAT-W. HSGPA ranges are defined as follows: “A” range: 4.33 (A+), 4.00 (A), and 3.67 (A-); “B” range: 3.33 (B+), 3.00 (B), and 2.67 (B-); and “C or Lower” range: 2.33 (C+) and lower. Means for categories containing fewer than 15 students are not reported. Sample sizes are reported below for SAT-by-HSGPA-Bands:

SAT Band	HSGPA		
	≤ C	B	A
600 - 1190	136	510	230
1200 - 1490	497	5,811	4,488
1500 - 1790	326	9,086	16,718
1800 - 2090	62	3,953	17,321
2100 - 2400	6	361	4,231

- Figure 5 presents students’ mean 3<sup>rd</sup> Yr Cum GPA by SAT score band, controlling for HSGPA. Even within HSGPA levels, there is still a strong positive relationship between the SAT and 3<sup>rd</sup> Yr Cum GPA. For example, of the students with a HSGPA equal to an A, those with an SAT total score from 600 to 1190 had a mean 3<sup>rd</sup> Yr Cum GPA of 2.8 as compared to a mean 3<sup>rd</sup> Yr Cum GPA of 3.6 for students with an SAT total score from 2100 and 2400.

Figure 6  
*Incremental Validity of the SAT: Mean 3<sup>rd</sup> Yr GPA by SAT Score Band, Controlling for HSGPA*



*Note.* SAT score bands based on the sum of SAT-CR, SAT-M, and SAT-W. HSGPA ranges are defined as follows: “A” range: 4.33 (A+), 4.00 (A), and 3.67 (A-); “B” range: 3.33 (B+), 3.00 (B), and 2.67 (B-); and “C or Lower” range: 2.33 (C+) and lower. Categories that include fewer than 15 students are not reported. Sample sizes are reported below for SAT-by-HSGPA-Bands:

SAT Band	HSGPA		
	≤ C	B	A
600 - 1190	136	510	230
1200 - 1490	497	5,811	4,488
1500 - 1790	326	9,086	16,718
1800 - 2090	62	3,953	17,321
2100 - 2400	6	361	4,231

- Figure 6 presents students’ mean 3<sup>rd</sup> Yr GPA by SAT score band, controlling for HSGPA. Even within HSGPA levels, there is still a strong positive relationship between the SAT and 3<sup>rd</sup> Yr GPA. For example, of the students with a HSGPA equal to an A, those with an SAT total score from 600 to 1190 had a mean 3<sup>rd</sup> Yr GPA of 2.8 as compared to a mean 3<sup>rd</sup> Yr GPA of 3.6 for students with an SAT total score from 2100 and 2400.

Table 5

*Descriptive Statistics of Study Variables by Institutional Characteristics*

Institutional Characteristic	k	n	HSGPA		SAT-CR		SAT-M		SAT-W		1 <sup>st</sup> Yr GPA		2 <sup>nd</sup> Yr GPA		3 <sup>rd</sup> Yr GPA		3 <sup>rd</sup> Yr Cum GPA		
			M	SD	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD	
<b>Control</b>	Private	36	23,733	3.69	0.45	599	93.6	612	92.0	597	92.9	3.18	0.51	3.23	0.52	3.29	0.54	3.25	0.45
	Public	24	40,003	3.65	0.49	557	89.9	577	92.7	549	88.0	3.08	0.60	3.06	0.65	3.11	0.70	3.11	0.54
<b>Admittance Rate</b>	Under 50%	12	10,880	3.77	0.41	628	89.2	643	85.7	629	87.0	3.28	0.47	3.33	0.45	3.37	0.48	3.34	0.40
	50 to 75%	33	42,282	3.68	0.47	569	89.3	588	90.5	562	87.6	3.09	0.58	3.08	0.63	3.14	0.67	3.13	0.53
	Over 75%	15	10,574	3.49	0.52	533	87.9	543	88.4	524	85.9	3.07	0.60	3.08	0.62	3.14	0.67	3.13	0.53
<b>Undergraduate Enrollment</b>	Small	11	2,653	3.55	0.51	560	96.5	565	91.5	557	92.6	3.03	0.58	3.09	0.57	3.15	0.60	3.10	0.53
	Medium	24	12,383	3.65	0.48	588	101.4	598	99.4	583	99.0	3.20	0.53	3.23	0.54	3.29	0.57	3.26	0.46
	Large	14	20,790	3.56	0.50	552	90.6	573	95.2	545	90.3	3.05	0.58	3.05	0.64	3.10	0.68	3.09	0.53
	Very large	11	27,910	3.77	0.43	583	88.5	601	88.4	577	88.3	3.13	0.57	3.14	0.62	3.19	0.65	3.18	0.52
<b>Total</b>		60	63,736	3.67	0.47	573	93.4	590	94.0	567	92.7	3.12	0.57	3.13	0.61	3.18	0.65	3.16	0.52

*Note.* k = number of institutions, n = subgroup sample size. Institution sizes are categorized by the number of undergraduates as follows: small = 750 to 1,999; medium 2,000 to 7,499; large = 7,500 to 14,999; and very large = 15,000 or more.

- Students at private institutions had higher mean SAT scores, HSGPA, 1<sup>st</sup> Yr GPA, 2<sup>nd</sup> Yr GPA, 3<sup>rd</sup> Yr GPA and 3<sup>rd</sup> Yr Cum GPA than those from public institutions.
- Students' mean SAT scores, HSGPA, 1<sup>st</sup> Yr GPA, and 3<sup>rd</sup> Yr Cum GPA increased as institutional selectivity increased (i.e., admittance rate decreased). The mean 2<sup>nd</sup> Yr GPA and 3<sup>rd</sup> Yr GPA was the same for institutions that admit 50-75% of applicants and those who admit over 75% but higher for institutions that admit under 50%.
- Students attending very large and medium institutions had the highest mean SAT scores, HSGPA, 1<sup>st</sup> Yr GPA, 2<sup>nd</sup> Yr GPA, 3<sup>rd</sup> Yr GPA and 3<sup>rd</sup> Yr Cum GPA compared to large and small institutions, though the differences were small.

Table 6

*Corrected Correlations of SAT and HSGPA with 3<sup>rd</sup> Yr Cum GPA by Institutional Characteristics*

<b>Institutional Characteristic</b>	<b>k</b>	<b>n</b>	<b>SAT- CR</b>	<b>SAT- M</b>	<b>SAT- W</b>	<b>SAT*</b>	<b>HSGPA</b>	<b>SAT*, HSGPA</b>	
<b>Control</b>	Private	36	23,733	0.55	0.52	0.58	0.60	0.58	0.68
	Public	24	40,003	0.51	0.49	0.54	0.56	0.57	0.65
<b>Admittance Rate</b>	Under 50%	12	10,880	0.56	0.51	0.59	0.61	0.56	0.67
	50 to 75%	33	42,282	0.52	0.50	0.55	0.57	0.57	0.65
	Over 75%	15	10,574	0.51	0.49	0.55	0.57	0.60	0.67
<b>Undergraduate Enrollment</b>	Small	11	2,653	0.57	0.57	0.60	0.63	0.60	0.71
	Medium	24	12,383	0.55	0.52	0.58	0.60	0.59	0.68
	Large	14	20,790	0.51	0.50	0.55	0.57	0.57	0.66
	Very large	11	27,910	0.51	0.49	0.55	0.57	0.56	0.65
<b>Total</b>		60	63,736	0.52	0.50	0.56	0.58	0.57	0.66

*Note.* k = number of institutions, n = subgroup sample size. The correlations were corrected for restriction of range within institutions and pooled across institution subgroups of at least 15. Institution sizes are categorized by the number of undergraduates as follows: small = 750 to 1,999; medium = 2,000 to 7,499; large = 7,500 to 14,999; and very large = 15,000 or more. SAT refers to the inclusion of all three sections in the relevant multiple correlation. For raw correlations, see Appendix B.

- As was found for first- and second-year grades, the correlation of scores on each SAT section with 3<sup>rd</sup> Yr Cum GPA was generally:
  - slightly higher in private institutions compared to public institutions;
  - higher in more selective institutions (those admitting fewer than half of their applicants) compared to those that admit at least half of applicants; and
  - higher in small institutions compared to larger institutions.
- Similar patterns emerged for the correlations of HSGPA with 3<sup>rd</sup> Yr Cum GPA, albeit with smaller differences. One notable exception is that HSGPA was more predictive in less selective institutions, whereas SAT was less predictive for less selective institutions.
- In all cases, the best predictor of 3<sup>rd</sup> Yr Cum GPA was SAT scores and HSGPA combined, with SAT scores providing significant incremental validity over high school grades alone.

Table 7

*Corrected Correlations of SAT and HSGPA with 3<sup>rd</sup> Yr GPA by Institutional Characteristics*

<b>Institutional Characteristic</b>	<b>k</b>	<b>n</b>	<b>SAT-CR</b>	<b>SAT-M</b>	<b>SAT-W</b>	<b>SAT*</b>	<b>HSGPA</b>	<b>SAT*,HSGPA</b>	
<b>Control</b>	Private	36	23,733	0.43	0.40	0.46	0.48	0.46	0.54
	Public	24	40,003	0.38	0.36	0.42	0.43	0.46	0.51
<b>Admittance Rate</b>	Under 50%	12	10,880	0.43	0.39	0.46	0.47	0.43	0.52
	50 to 75%	33	42,282	0.39	0.37	0.43	0.44	0.46	0.51
	Over 75%	15	10,574	0.40	0.38	0.44	0.45	0.49	0.54
<b>Undergraduate Enrollment</b>	Small	11	2,653	0.46	0.47	0.49	0.52	0.51	0.59
	Medium	24	12,383	0.44	0.40	0.47	0.48	0.48	0.55
	Large	14	20,790	0.37	0.35	0.40	0.41	0.44	0.49
	Very large	11	27,910	0.40	0.37	0.44	0.45	0.46	0.52
<b>Total</b>		60	63,736	0.40	0.38	0.43	0.45	0.46	0.52

*Note.* k = number of institutions, n = subgroup sample size. The correlations were corrected for restriction of range within institutions and pooled across institution subgroups of at least 15. Institution sizes are categorized by the number of undergraduates as follows: small = 750 to 1,999; medium = 2,000 to 7,499; large = 7,500 to 14,999; and very large = 15,000 or more. SAT refers to the inclusion of all three sections in the relevant multiple correlation. For raw correlations, see Appendix D.

- Similar to the 3<sup>rd</sup> Yr Cum GPA results, the correlation of scores on each SAT section with 3<sup>rd</sup> Yr GPA was generally:
  - slightly higher in private institutions compared to public institutions;
  - higher in more selective institutions (those admitting less than half of their applicants) compared to those that admit at least half of their applicants; and
  - higher in small institutions compared to larger institutions.
- The correlations of HSGPA with 3<sup>rd</sup> Yr GPA followed similar patterns to those mentioned above for SAT, albeit with smaller differences. Just as with 3<sup>rd</sup> Yr Cum GPA, HSGPA was more predictive of 3<sup>rd</sup> Yr GPA in less selective institutions, whereas SAT was less predictive for less selective institutions.
- In all cases, the best predictor of 3<sup>rd</sup> Yr GPA was SAT scores and HSGPA combined, with SAT scores providing significant incremental validity over high school grades alone.

Table 8

*Descriptive Statistics of Study Variables by Student Characteristics*

Student Characteristic	n	HSGPA		SAT-CR		SAT-M		SAT-W		1 <sup>st</sup> Yr GPA		2 <sup>nd</sup> Yr GPA		3 <sup>rd</sup> Yr GPA		3 <sup>rd</sup> Yr Cum GPA		
		M	SD	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD	
<b>Gender</b>	Male	28,551	3.61	0.50	576	92.7	613	92.3	563	93.3	3.05	0.59	3.03	0.64	3.07	0.69	3.07	0.54
	Female	35,185	3.71	0.45	570	93.9	572	91.2	570	92.1	3.17	0.55	3.21	0.57	3.27	0.60	3.24	0.49
<b>Race/ Ethnicity</b>	African American	3,648	3.49	0.53	515	88.3	514	86.3	508	86.8	2.78	0.59	2.76	0.65	2.80	0.71	2.82	0.53
	American Indian	295	3.56	0.50	555	89.2	568	92.0	542	89.6	2.98	0.58	2.95	0.66	2.98	0.72	3.00	0.54
	Asian	6,586	3.72	0.44	573	101.4	630	95.8	572	99.8	3.14	0.58	3.13	0.61	3.18	0.63	3.17	0.52
	Hispanic	3,954	3.69	0.47	542	89.6	553	92.2	537	88.0	2.96	0.58	2.92	0.66	2.97	0.71	2.98	0.53
	Other	1,902	3.63	0.48	569	93.5	582	94.2	566	95.2	3.09	0.56	3.09	0.62	3.17	0.64	3.14	0.51
	White	44,431	3.67	0.47	579	90.2	593	89.8	572	89.6	3.15	0.56	3.17	0.59	3.23	0.63	3.21	0.50
	Not Stated	2,920	3.68	0.48	599	99.1	600	94.3	588	98.9	3.18	0.55	3.19	0.57	3.23	0.62	3.22	0.49
<b>Best Language</b>	English Only	59,373	3.67	0.47	575	92.2	590	92.9	569	91.6	3.12	0.57	3.13	0.61	3.19	0.65	3.17	0.51
	English & Another Language	3,118	3.68	0.47	547	98.5	584	105.9	550	101.1	3.04	0.58	3.01	0.64	3.07	0.68	3.06	0.54
	Another Language	627	3.70	0.47	473	98.1	612	108.3	492	101.5	3.16	0.56	3.13	0.61	3.14	0.62	3.16	0.49
	Not Stated	618	3.61	0.51	559	105.0	575	110.1	554	107.0	3.07	0.58	3.07	0.60	3.14	0.63	3.12	0.51
<b>Parental Income</b>	< \$30,000	4,371	3.65	0.50	527	96.7	548	99.1	520	94.9	2.97	0.60	2.95	0.66	2.99	0.71	3.00	0.54
	\$30,000-50,000	5,658	3.67	0.49	552	93.3	566	93.3	542	90.1	3.05	0.59	3.04	0.65	3.08	0.70	3.08	0.54
	\$50,000-70,000	6,734	3.68	0.48	560	89.2	574	89.1	551	88.3	3.08	0.58	3.08	0.63	3.13	0.69	3.12	0.53
	\$70,000-100,000	10,817	3.68	0.47	570	91.0	584	91.9	562	89.6	3.12	0.57	3.13	0.61	3.18	0.65	3.16	0.51
	> \$100,000	15,330	3.67	0.47	591	88.6	610	89.4	587	88.1	3.16	0.55	3.18	0.58	3.24	0.61	3.22	0.49
Not Stated	20,826	3.66	0.47	581	93.9	598	93.7	576	93.3	3.15	0.56	3.16	0.59	3.22	0.62	3.19	0.50	
<b>Highest Parental Ed. Level</b>	No HS Diploma	1,010	3.61	0.52	498	95.5	540	101.5	497	92.5	2.95	0.59	2.87	0.69	2.93	0.74	2.95	0.56
	HS Diploma	11,591	3.62	0.50	533	88.1	551	90.5	527	87.0	2.98	0.59	2.98	0.65	3.03	0.71	3.03	0.54
	Associate Degree	3,805	3.63	0.50	542	87.1	558	87.9	534	86.6	3.03	0.59	3.03	0.64	3.07	0.70	3.07	0.54
	Bachelor Degree	21,319	3.67	0.47	573	88.3	590	89.7	566	87.4	3.12	0.57	3.14	0.60	3.19	0.64	3.17	0.51
	Graduate Degree	22,895	3.70	0.46	602	89.5	616	90.0	596	88.9	3.20	0.54	3.22	0.57	3.27	0.60	3.25	0.49
Not Stated	3,116	3.65	0.47	570	100.2	596	100.5	567	100.1	3.12	0.56	3.14	0.58	3.19	0.63	3.17	0.50	
<b>Total</b>		63,736	3.67	0.47	573	93.4	590	94.0	567	92.7	3.12	0.57	3.13	0.61	3.18	0.65	3.16	0.52

Note. n = subgroup sample size.

- Similar to previous findings, males had higher SAT-CR and SAT-M scores, whereas females had higher SAT-W scores, HSGPA, 1<sup>st</sup> Yr GPA, 2<sup>nd</sup> Yr GPA, 3<sup>rd</sup> Yr GPA and 3<sup>rd</sup> Yr Cum GPA.
- Asian and White students outperformed other ethnic subgroups on all of the academic indicators, except for HSGPA, where Hispanic students had higher grades than White students.
- Students whose best spoken language was English had the highest mean SAT-CR score, SAT-W score, 3<sup>rd</sup> Yr GPA and 3<sup>rd</sup> Yr Cum GPA whereas students whose best spoken language was not English had the highest mean HSGPA, SAT-M score, 1<sup>st</sup> Yr GPA.
- As parental income and education level increase, so did mean performance on all academic indicators. The one exception was HSGPA, where there was very little variability in performance across parental income bands. Because HSGPA is not a standardized measure of performance across high schools in the U.S., these results are not surprising given that high schools vary in terms of the mean family income of their student body.

Table 9  
*Corrected Correlation of SAT Scores and HSGPA with 3<sup>rd</sup> Yr Cum GPA by Student Characteristics*

<b>Student Characteristic</b>		<b>k</b>	<b>n</b>	<b>SAT-CR</b>	<b>SAT-M</b>	<b>SAT-W</b>	<b>SAT*</b>	<b>HSGPA</b>	<b>SAT*, HSGPA</b>
<b>Gender</b>	Male	58	28,551	0.50	0.49	0.53	0.55	0.56	0.64
	Female	60	35,185	0.57	0.57	0.59	0.63	0.57	0.69
<b>Race/ Ethnicity</b>	African American	40	3,516	0.45	0.42	0.48	0.50	0.48	0.56
	American Indian	4	70	0.39	0.41	0.50	0.51	0.42	0.55
	Asian	41	6,450	0.44	0.46	0.47	0.50	0.48	0.57
	Hispanic	41	3,817	0.47	0.45	0.50	0.52	0.48	0.58
	Other	34	1,691	0.51	0.48	0.54	0.56	0.52	0.62
	White	60	44,431	0.51	0.48	0.55	0.57	0.59	0.67
	Not Stated	51	2,864	0.49	0.45	0.54	0.55	0.54	0.62
<b>Best Language</b>	English Only	60	59,373	0.53	0.50	0.56	0.58	0.58	0.67
	English & Another	40	2,966	0.45	0.46	0.48	0.51	0.44	0.55
	Another Language	12	402	0.29	0.32	0.32	0.34	0.34	0.39
	Not Stated	15	350	0.42	0.43	0.47	0.49	0.54	0.59
<b>Parental Income</b>	< \$30,000	51	4,270	0.47	0.48	0.49	0.53	0.47	0.58
	\$30,000-50,000	56	5,615	0.49	0.48	0.53	0.55	0.54	0.63
	\$50,000-70,000	57	6,697	0.49	0.48	0.53	0.55	0.57	0.64
	\$70,000-100,000	58	10,793	0.51	0.48	0.54	0.56	0.58	0.66
	> \$100,000	58	15,310	0.53	0.50	0.56	0.58	0.61	0.68
	Not Stated	60	20,826	0.53	0.51	0.56	0.58	0.57	0.66
<b>Highest Parental Ed. Level</b>	No HS Diploma	20	793	0.39	0.43	0.42	0.46	0.47	0.53
	HS Diploma	58	11,566	0.48	0.46	0.51	0.53	0.52	0.61
	Associate Degree	45	3,676	0.50	0.47	0.53	0.55	0.56	0.64
	Bachelor Degree	60	21,319	0.51	0.49	0.55	0.57	0.59	0.66
	Graduate Degree	60	22,895	0.53	0.51	0.56	0.58	0.60	0.68
	Not Stated	48	3,024	0.52	0.50	0.55	0.57	0.52	0.63
<b>Total</b>		60	63,736	0.52	0.50	0.56	0.58	0.57	0.66

*Note.* k = number of institutions, n = subgroup sample size. The correlations were corrected for restriction of range within institutions and pooled across institution subgroups of at least 15. SAT refers to the inclusion of all three sections in the relevant multiple correlation. For raw correlations, see Appendix C.

- Both HSGPA and SAT scores were more predictive of 3<sup>rd</sup> Yr Cum GPA for females than males, for White students as compared to the other racial/ethnic subgroups, for students whose best language was English as compared to the other best language subgroups, and for students from higher SES families (as measured by parental income and highest parental education level).
- SAT scores are more predictive of 3<sup>rd</sup> Yr Cum GPA than HSGPA for females (0.63 for the SAT as compared to 0.57 for the HSGPA) whereas HSGPA is more predictive of 3<sup>rd</sup> Yr Cum GPA than SAT scores for males, though the differences are much smaller (0.56 for HSGPA as compared to 0.55 for the SAT).

- Similar to previous findings (Mattern et al., 2008), the multiple correlation of SAT scores with 3<sup>rd</sup> Yr Cum GPA was higher than the HSGPA-3<sup>rd</sup> Yr Cum GPA correlation for all racial/ethnic subgroups except for White students.
- For all groups, the best predictor of 3<sup>rd</sup> Yr Cum GPA was SAT scores and HSGPA combined, with SAT scores providing significant incremental validity over high school grades alone.

Table 10  
*Corrected Correlation of SAT Scores and HSGPA with 3<sup>rd</sup> Yr GPA by Student Characteristics*

<b>Student Characteristic</b>		<b>k</b>	<b>n</b>	<b>SAT-CR</b>	<b>SAT-M</b>	<b>SAT-W</b>	<b>SAT*</b>	<b>HSGPA</b>	<b>SAT*, HSGPA</b>
<b>Gender</b>	Male	58	28,551	0.38	0.37	0.41	0.42	0.44	0.49
	Female	60	35,185	0.44	0.44	0.46	0.49	0.45	0.54
<b>Race/Ethnicity</b>	African American	40	3,516	0.29	0.26	0.32	0.33	0.34	0.38
	American Indian	4	70	0.31	0.32	0.40	0.41	0.23	0.41
	Asian	41	6,450	0.34	0.33	0.36	0.38	0.38	0.43
	Hispanic	41	3,817	0.35	0.32	0.37	0.38	0.37	0.44
	Other	34	1,691	0.40	0.36	0.43	0.44	0.43	0.50
	White	60	44,431	0.38	0.35	0.42	0.43	0.47	0.52
	Not Stated	51	2,864	0.36	0.32	0.41	0.41	0.42	0.48
<b>Best Language</b>	English Only	60	59,373	0.41	0.38	0.44	0.45	0.47	0.53
	English & Another	40	2,966	0.34	0.36	0.37	0.40	0.34	0.43
	Another Language	12	402	0.15	0.17	0.20	0.21	0.25	0.27
	Not Stated	15	350	0.26	0.23	0.28	0.29	0.39	0.40
<b>Parental Income</b>	< \$30,000	51	4,270	0.36	0.36	0.38	0.40	0.37	0.44
	\$30,000-50,000	56	5,615	0.36	0.34	0.40	0.41	0.42	0.47
	\$50,000-70,000	57	6,697	0.38	0.36	0.42	0.43	0.47	0.52
	\$70,000-100,000	58	10,793	0.38	0.34	0.41	0.42	0.46	0.51
	> \$100,000	58	15,310	0.40	0.36	0.43	0.44	0.49	0.54
	Not Stated	60	20,826	0.40	0.38	0.43	0.45	0.46	0.52
<b>Highest Parental Ed. Level</b>	No HS Diploma	20	793	0.35	0.37	0.36	0.40	0.38	0.45
	HS Diploma	58	11,566	0.35	0.33	0.38	0.39	0.40	0.46
	Associate Degree	45	3,676	0.36	0.33	0.40	0.41	0.44	0.49
	Bachelor Degree	60	21,319	0.39	0.37	0.43	0.44	0.47	0.53
	Graduate Degree	60	22,895	0.40	0.38	0.44	0.45	0.48	0.53
	Not Stated	48	3,024	0.39	0.36	0.42	0.43	0.40	0.48
<b>Total</b>		60	63,736	0.40	0.38	0.43	0.45	0.46	0.52

*Note.* k = number of institutions, n = subgroup sample size. The correlations were corrected for restriction of range within institutions and pooled across institution subgroups of at least 15. SAT refers to the inclusion of all three sections in the relevant multiple correlation. For raw correlations, see Appendix E.

- Similar to previous findings and the 3<sup>rd</sup> Yr Cum GPA results above, both HSGPA and SAT scores were more predictive of 3<sup>rd</sup> Yr GPA for females than males, for White students as compared to the other racial/ethnic subgroups, for students whose best language was English as compared to the other best language subgroups, and for students from higher SES families (as measured by parental income and highest parental education level).
- As with 3<sup>rd</sup> Yr Cum GPA, the best predictor of 3<sup>rd</sup> Yr GPA was SAT scores and HSGPA combined.

Table 11

*Average Over- (-) and Under-prediction (+) of 3<sup>rd</sup> Yr Cum GPA for SAT Scores and HSGPA*

<b>Student Characteristic</b>		<b>k</b>	<b>n</b>	<b>SAT-CR</b>	<b>SAT-M</b>	<b>SAT-W</b>	<b>SAT*</b>	<b>HSGPA</b>	<b>SAT*, HSGPA</b>
<b>Gender</b>	Male	58	28,551	-0.09	-0.12	-0.08	-0.09	-0.06	-0.07
	Female	60	35,185	0.08	0.10	0.06	0.08	0.05	0.06
<b>Race/ Ethnicity</b>	African American	56	3,648	-0.22	-0.20	-0.20	-0.17	-0.25	-0.15
	American Indian	52	295	-0.13	-0.13	-0.11	-0.11	-0.12	-0.10
	Asian	59	6,586	0.02	-0.04	0.01	0.00	0.00	0.00
	Hispanic	60	3,954	-0.11	-0.10	-0.09	-0.07	-0.17	-0.08
	Other	59	1,902	-0.01	-0.01	-0.02	-0.01	-0.01	0.00
	White	60	44,431	0.03	0.03	0.02	0.02	0.03	0.02
	Not Stated	60	2,920	0.00	0.03	0.01	0.00	0.04	0.01
<b>Best Language</b>	English Only	60	59,373	0.00	0.00	0.00	0.00	0.01	0.00
	English & Another	60	3,118	-0.03	-0.07	-0.04	-0.03	-0.09	-0.03
	Another Language	54	627	0.20	-0.02	0.18	0.17	0.00	0.15
	Not Stated	59	618	-0.02	-0.02	-0.01	-0.01	-0.03	-0.01
<b>Parental Income</b>	< \$30,000	60	4,371	-0.07	-0.08	-0.05	-0.04	-0.14	-0.06
	\$30,000-50,000	60	5,658	-0.03	-0.03	-0.02	-0.02	-0.07	-0.03
	\$50,000-70,000	60	6,734	-0.01	-0.01	-0.01	-0.01	-0.04	-0.03
	\$70,000-100,000	60	10,817	0.01	0.02	0.01	0.01	0.01	0.00
	> \$100,000	60	15,330	0.01	0.01	0.00	0.00	0.04	0.02
	Not Stated	60	20,826	0.01	0.01	0.01	0.01	0.03	0.02
<b>Highest Parental Ed. Level</b>	No HS Diploma	56	1,010	-0.05	-0.10	-0.04	-0.02	-0.16	-0.03
	HS Diploma	60	11,591	-0.05	-0.06	-0.04	-0.03	-0.10	-0.05
	Associate Degree	60	3,805	-0.02	-0.03	-0.02	-0.01	-0.06	-0.03
	Bachelor Degree	60	21,319	0.01	0.01	0.01	0.01	0.01	0.01
	Graduate Degree	60	22,895	0.02	0.03	0.02	0.01	0.05	0.02
Not Stated	60	3,116	0.02	0.00	0.02	0.01	0.01	0.02	
<b>Total</b>		60	63,736	0.00	0.00	0.00	0.00	0.00	0.00

*Note.* k = number of institutions, n = subgroup sample size. Negative values indicate over-prediction; positive values indicate under-prediction. 3<sup>rd</sup> Yr Cum GPA prediction equations were estimated for each institution separately. Individual residuals were computed by subtracting predicted raw 3<sup>rd</sup> Yr Cum GPA from actual raw 3<sup>rd</sup> Yr Cum GPA. SAT refers to all three sections being entered as separate predictors.

- Similar to previous differential prediction findings, SAT scores, and to a lesser extent HSGPA, over-predicted 3<sup>rd</sup> Yr Cum GPA for males and under-predicted it for females.
- SAT scores, and to a greater extent HSGPA, over-predicted 3<sup>rd</sup> Yr Cum GPA for African American, American Indian, and Hispanic students.
- Relative to HSGPA, the SAT resulted in less prediction error for students who best language was English and another language but more prediction error for students whose best language is another language.
- SAT scores, and to a greater extent HSGPA, over-predicted 3<sup>rd</sup> Yr Cum GPA for students from lower SES families (i.e., parental income ≤ \$50,000; parental education ≤ Associate Degree).

Table 12

*Average Over- (-) and Under-prediction (+) of 3<sup>rd</sup> Yr GPA for SAT Scores and HSGPA*

<b>Student Characteristic</b>		<b>k</b>	<b>n</b>	<b>SAT-CR</b>	<b>SAT-M</b>	<b>SAT-W</b>	<b>SAT*</b>	<b>HSGPA</b>	<b>SAT*, HSGPA</b>
<b>Gender</b>	Male	58	28,551	-0.11	-0.14	-0.10	-0.11	-0.08	-0.08
	Female	60	35,185	0.09	0.11	0.08	0.09	0.07	0.07
<b>Race/ Ethnicity</b>	African American	56	3,648	-0.25	-0.25	-0.23	-0.21	-0.27	-0.19
	American Indian	52	295	-0.16	-0.17	-0.15	-0.15	-0.16	-0.14
	Asian	59	6,586	0.01	-0.04	0.01	0.00	0.00	0.00
	Hispanic	60	3,954	-0.13	-0.13	-0.12	-0.10	-0.18	-0.11
	Other	59	1,902	-0.01	-0.01	-0.01	-0.01	-0.01	0.00
	White	60	44,431	0.03	0.04	0.03	0.03	0.04	0.03
	Not Stated	60	2,920	-0.01	0.02	-0.01	-0.01	0.02	0.00
<b>Best Language</b>	English Only	60	59,373	0.00	0.01	0.00	0.00	0.01	0.00
	English & Another	60	3,118	-0.05	-0.09	-0.05	-0.05	-0.10	-0.05
	Another Language	54	627	0.13	-0.06	0.13	0.12	-0.04	0.10
	Not Stated	59	618	-0.02	-0.03	-0.02	-0.01	-0.03	-0.01
<b>Parental Income</b>	< \$30,000	60	4,371	-0.09	-0.11	-0.07	-0.06	-0.16	-0.08
	\$30,000-50,000	60	5,658	-0.05	-0.05	-0.04	-0.03	-0.08	-0.05
	\$50,000-70,000	60	6,734	-0.02	-0.02	-0.01	-0.01	-0.04	-0.03
	\$70,000-100,000	60	10,817	0.01	0.02	0.01	0.01	0.01	0.00
	> \$100,000	60	15,330	0.02	0.02	0.01	0.01	0.05	0.03
	Not Stated	60	20,826	0.02	0.02	0.01	0.01	0.03	0.02
<b>Highest Parental Ed. Level</b>	No HS Diploma	56	1,010	-0.09	-0.14	-0.08	-0.06	-0.19	-0.07
	HS Diploma	60	11,591	-0.06	-0.07	-0.05	-0.04	-0.10	-0.06
	Associate Degree	60	3,805	-0.03	-0.04	-0.03	-0.03	-0.07	-0.05
	Bachelor Degree	60	21,319	0.01	0.01	0.01	0.01	0.02	0.01
	Graduate Degree	60	22,895	0.03	0.03	0.02	0.02	0.06	0.03
Not Stated	60	3,116	0.01	0.00	0.01	0.01	0.01	0.01	
<b>Total</b>		60	63,736	0.00	0.00	0.00	0.00	0.00	0.00

*Note.* k = number of institutions, n = subgroup sample size. Negative values indicate over-prediction; positive values indicate under-prediction. 3<sup>rd</sup> Yr GPA prediction equations were estimated for each institution separately. Individual residuals were computed by subtracting predicted raw 3<sup>rd</sup> Yr GPA from actual raw 3<sup>rd</sup> Yr GPA. SAT refers to all three sections being entered as separate predictors.

- Similar to previous differential prediction findings, SAT scores, and to a lesser extent HSGPA, over-predicted 3<sup>rd</sup> Yr GPA for males and under-predicted 3<sup>rd</sup> Yr for females.
- SAT scores, and to a greater extent HSGPA, over-predicted 3<sup>rd</sup> Yr GPA for African American, American Indian, and Hispanic students.
- Relative to HSGPA, the SAT resulted in less prediction error for students who best language was English and another language but more prediction error for students whose best language is another language.
- SAT scores, and to a greater extent HSGPA, over-predicted 3<sup>rd</sup> Yr GPA for students from lower SES families (i.e., parental income ≤ \$50,000; parental education ≤ Associate Degree).

Appendix A

*Institutions Providing Third-Year Outcomes Data for the 2006 Cohort*

<b>Institution Name</b>		
Albany College of Pharmacy and Health Sciences	Meredith College	University of Pittsburgh
Austin College	Ohio State University, Columbus	University of Portland
Baldwin-Wallace College	Saint Anselm College	University of Rhode Island
Boston College	Saint Michael's College	University of Southern California
Boston University	Salve Regina University	University of Southern Indiana
Brandeis University	Schreiner University	University of Texas, Austin
Chapman University	Seattle University	University of the Pacific
Claremont McKenna College	Smith College	Valdosta State University
Clemson University	Syracuse University	Vanderbilt University
Coastal Carolina University	Temple University	Washington State University, Pullman
Drew University	Texas A&M University, Commerce	Washington State University, Vancouver
Eastern Connecticut State University	Texas State University, San Marcos	Western Washington University
Fordham University	Tufts University	Wheaton College
Georgia Institute of Technology	University of Cincinnati	Wilkes University
Iona College	University of Denver	Williams College
Kenyon College	University of Georgia	Anonymous A
Kutztown University of Pennsylvania	University of Massachusetts, Dartmouth	Anonymous B
Lafayette College	University of New Haven	Anonymous C
Lasell College	University of North Texas	Anonymous D
Lycoming College	University of Oregon	Anonymous E

Appendix B

*Raw Correlations of SAT and HSGPA with 3<sup>rd</sup> Yr Cum GPA by Institutional Characteristics*

<b>Institutional Characteristic</b>	<b>k</b>	<b>n</b>	<b>SAT-CR</b>	<b>SAT-M</b>	<b>SAT-W</b>	<b>SAT*</b>	<b>HSGPA</b>	<b>SAT*,HSGPA</b>	
<b>Control</b>	Private	36	23,733	0.35	0.28	0.39	0.41	0.39	0.50
	Public	24	40,003	0.31	0.27	0.35	0.37	0.37	0.47
<b>Admittance Rate</b>	Under 50%	12	10,880	0.36	0.27	0.40	0.42	0.36	0.49
	50 to 75%	33	42,282	0.30	0.26	0.34	0.37	0.35	0.46
	Over 75%	15	10,574	0.36	0.32	0.40	0.43	0.48	0.55
<b>Undergraduate Enrollment</b>	Small	11	2,653	0.36	0.35	0.40	0.45	0.44	0.55
	Medium	24	12,383	0.34	0.27	0.38	0.40	0.40	0.50
	Large	14	20,790	0.31	0.26	0.35	0.37	0.39	0.48
	Very large	11	27,910	0.32	0.27	0.36	0.38	0.35	0.46
<b>Total</b>		60	63,736	0.32	0.27	0.36	0.39	0.38	0.48

*Note.* k = number of institutions, n = subgroup sample size. The correlations were computed within institutions and pooled across institution subgroups of at least 15. Institution sizes are categorized by the number of undergraduates as follows: small = 750 to 1,999; medium = 2,000 to 7,499; large = 7,500 to 14,999; and very large = 15,000 or more. SAT refers to the inclusion of all three sections in the relevant multiple correlation.

Appendix C

*Raw Correlation of SAT Scores and HSGPA with 3<sup>rd</sup> Yr Cum GPA by Student Characteristics*

<b>Student Characteristic</b>	<b>k</b>	<b>n</b>	<b>SAT-CR</b>	<b>SAT-M</b>	<b>SAT-W</b>	<b>SAT*</b>	<b>HSGPA</b>	<b>SAT*,HSGPA</b>	
<b>Gender</b>	Male	58	28,551	0.29	0.28	0.33	0.36	0.36	0.45
	Female	60	35,185	0.37	0.36	0.39	0.44	0.36	0.50
<b>Race/ Ethnicity</b>	African American	40	3,516	0.24	0.20	0.29	0.30	0.31	0.40
	American Indian	4	70	0.28	0.23	0.41	0.42	0.33	0.46
	Asian	41	6,450	0.25	0.25	0.29	0.32	0.28	0.38
	Hispanic	41	3,817	0.28	0.23	0.32	0.33	0.28	0.40
	Other	34	1,691	0.32	0.25	0.34	0.37	0.33	0.45
	White	60	44,431	0.30	0.23	0.34	0.36	0.40	0.48
	Not Stated	51	2,864	0.32	0.23	0.39	0.40	0.36	0.48
<b>Best Language</b>	English Only	60	59,373	0.33	0.27	0.37	0.39	0.38	0.49
	English & Another	40	2,966	0.28	0.29	0.33	0.36	0.24	0.40
	Another Language	12	402	0.12	0.19	0.18	0.22	0.16	0.25
	Not Stated	15	350	0.32	0.33	0.41	0.42	0.39	0.49
<b>Parental Income</b>	< \$30,000	51	4,270	0.28	0.31	0.33	0.37	0.30	0.43
	\$30,000-50,000	56	5,615	0.32	0.28	0.37	0.39	0.37	0.47
	\$50,000-70,000	57	6,697	0.30	0.26	0.35	0.37	0.38	0.47
	\$70,000-100,000	58	10,793	0.31	0.25	0.35	0.37	0.38	0.47
	> \$100,000	58	15,310	0.30	0.22	0.33	0.36	0.41	0.49
	Not Stated	60	20,826	0.33	0.27	0.37	0.39	0.38	0.48
<b>Highest Parental Ed. Level</b>	No HS Diploma	20	793	0.19	0.29	0.24	0.31	0.30	0.39
	HS Diploma	58	11,566	0.29	0.26	0.33	0.35	0.35	0.44
	Associate Degree	45	3,676	0.32	0.26	0.36	0.38	0.40	0.48
	Bachelor Degree	60	21,319	0.31	0.25	0.35	0.37	0.40	0.48
	Graduate Degree	60	22,895	0.31	0.24	0.35	0.37	0.39	0.48
Not Stated	48	3,024	0.35	0.29	0.39	0.41	0.32	0.47	
<b>Total</b>		60	63,736	0.32	0.27	0.36	0.39	0.38	0.48

*Note.* k = number of institutions, n = subgroup sample size. The correlations were computed within institutions and pooled across institution subgroups of at least 15.

Appendix D

*Raw Correlations of SAT and HSGPA with 3<sup>rd</sup> Yr GPA by Institutional Characteristics*

<b>Institutional Characteristic</b>	<b>k</b>	<b>n</b>	<b>SAT-CR</b>	<b>SAT-M</b>	<b>SAT-W</b>	<b>SAT*</b>	<b>HSGPA</b>	<b>SAT*,HSGPA</b>	
<b>Control</b>	Private	36	23,733	0.26	0.20	0.30	0.31	0.29	0.38
	Public	24	40,003	0.21	0.17	0.26	0.26	0.28	0.35
<b>Admittance Rate</b>	Under 50%	12	10,880	0.27	0.19	0.30	0.31	0.26	0.36
	50 to 75%	33	42,282	0.21	0.17	0.25	0.26	0.27	0.34
	Over 75%	15	10,574	0.27	0.23	0.31	0.32	0.38	0.43
<b>Undergraduate Enrollment</b>	Small	11	2,653	0.28	0.28	0.31	0.35	0.35	0.43
	Medium	24	12,383	0.26	0.19	0.29	0.31	0.31	0.39
	Large	14	20,790	0.20	0.16	0.25	0.26	0.29	0.34
	Very large	11	27,910	0.23	0.18	0.27	0.28	0.27	0.35
<b>Total</b>		60	63,736	0.23	0.18	0.27	0.28	0.29	0.36

*Note.* k = number of institutions, n = subgroup sample size. The correlations were computed within institutions and pooled across institution subgroups of at least 15. Institution sizes are categorized by the number of undergraduates as follows: small = 750 to 1,999; medium = 2,000 to 7,499; large = 7,500 to 14,999; and very large = 15,000 or more. SAT refers to the inclusion of all three sections in the relevant multiple correlation.

Appendix E

*Raw Correlation of SAT Scores and HSGPA with 3<sup>rd</sup> Yr GPA by Student Characteristics*

<b>Student Characteristic</b>	<b>k</b>	<b>n</b>	<b>SAT-CR</b>	<b>SAT-M</b>	<b>SAT-W</b>	<b>SAT*</b>	<b>HSGPA</b>	<b>SAT*,HSGPA</b>	
<b>Gender</b>	Male	58	28,551	0.21	0.19	0.24	0.26	0.27	0.34
	Female	60	35,185	0.26	0.25	0.29	0.32	0.27	0.37
<b>Race/ Ethnicity</b>	African American	40	3,516	0.15	0.10	0.20	0.20	0.21	0.27
	American Indian	4	70	0.21	0.19	0.32	0.33	0.23	0.36
	Asian	41	6,450	0.18	0.16	0.21	0.23	0.21	0.28
	Hispanic	41	3,817	0.19	0.14	0.22	0.23	0.21	0.28
	Other	34	1,691	0.24	0.17	0.26	0.28	0.28	0.36
	White	60	44,431	0.20	0.14	0.25	0.25	0.30	0.35
	Not Stated	51	2,864	0.22	0.14	0.29	0.29	0.28	0.36
<b>Best Language</b>	English Only	60	59,373	0.23	0.18	0.27	0.28	0.29	0.36
	English & Another	40	2,966	0.21	0.22	0.25	0.27	0.19	0.31
	Another Language	12	402	0.04	0.09	0.11	0.13	0.14	0.18
	Not Stated	15	350	0.21	0.17	0.26	0.26	0.27	0.33
<b>Parental Income</b>	< \$30,000	51	4,270	0.21	0.22	0.25	0.27	0.22	0.32
	\$30,000-50,000	56	5,615	0.22	0.19	0.27	0.28	0.27	0.34
	\$50,000-70,000	57	6,697	0.22	0.17	0.27	0.27	0.31	0.37
	\$70,000-100,000	58	10,793	0.21	0.15	0.25	0.26	0.30	0.35
	> \$100,000	58	15,310	0.21	0.14	0.25	0.26	0.31	0.36
	Not Stated	60	20,826	0.23	0.18	0.27	0.28	0.29	0.36
<b>Highest Parental Ed. Level</b>	No HS Diploma	20	793	0.16	0.24	0.20	0.25	0.23	0.31
	HS Diploma	58	11,566	0.20	0.17	0.24	0.25	0.27	0.33
	Associate Degree	45	3,676	0.22	0.16	0.27	0.27	0.31	0.36
	Bachelor Degree	60	21,319	0.22	0.16	0.26	0.27	0.31	0.36
	Graduate Degree	60	22,895	0.22	0.16	0.26	0.26	0.30	0.36
Not Stated	48	3,024	0.25	0.18	0.29	0.30	0.24	0.34	
<b>Total</b>		60	63,736	0.23	0.18	0.27	0.28	0.29	0.36

*Note.* k = number of institutions, n = subgroup sample size. The correlations were computed within institutions and pooled across institution subgroups of at least 15.