"DEFINING PROMISE: OPTIONAL STANDARDIZED TESTING POLICIES IN AMERICAN COLLEGE AND UNIVERSITY ADMISSIONS"

<u>http://www.nacacnet.org/research/research-data/nacac-</u> <u>research/Documents/DefiningPromise.pdf</u>

William C. Hiss, Principal Investigator Valerie W. Franks, Co-Author & Lead Researcher

> IACAC Conference Itasca, IL May 2, 2014

Goals of the Study

- Produce a national study modeled on the Bates 25-year look-back study, "Defining Promise: Twenty-five Years of Optional Testing at Bates College: 1984-2009"
- Examine optional standardized testing policies with 4-year cumulative college/university GPA and graduation rates rather than 1st year GPA.
- Design the study across institutional types: 20 private colleges and universities, 6 public universities, 5 minority-serving institutions, 2 arts institutions.
- Consider who is doing the heavy lifting, serving broad constituencies. Who is exploring the breadth of human intellect and promise in imaginative ways? Who is serving students most desperately in need of access to higher education?"
- Contribute to the NACAC Commission on Standardized Tests recommendation to "take back the conversation" about testing from the various groups for whom testing was either a profession or a cause.
- Examine a fundamental question: Are college admissions decisions reliable for students who are admitted without SAT or ACT scores?
- Let the study serve as a model for other examinations of standardized testing.

- What percentages of enrolled students are non-submitters?
- Who uses an optional testing policy? What are the characteristics of submitters and non-submitters? Does the policy have appeal across socioeconomic groups or support diversity efforts? Does it help public universities serve state residents? Does it help private colleges reach out to students not historically enrolled?
- What are the high school GPAs (HSGPA) of submitters and non-submitters of testing? What majors or curricula do they choose?
- What are the graduation rates of submitters and non-submitters, as segmented by institutional types?
- What are the practical applications of an optional testing policy for enrollment planning? Can it build applicant pools, extend institutional geographic reach, improve diversity, strengthen intellectual achievement, and contribute to accurate financial modeling?

Institutions in the Study Who Have Announced their Participation

- Bates College
- Washington State University
- Smith College
- Wake Forest University
- Lawrence University
- Franklin & Marshall College
- Denison University
- Pitzer College
- Dickinson College
- College of the Atlantic
- Wheaton College (MA)
- San Francisco Art Institute

Methodology

- Pool: roughly 850 institutions listed by Fairtest, reduced to about 450 to only include 4-year, non-profit, IPEDS-submitting, and with national visibility.
- 120 institutions and state systems examined and contacted to choose 33.
- 122,916 student and alumni records submitted across a maximum of eight cohort years, from 23 states and US territories. For consistency, all ACT scores were converted into SAT scores, using standard conversion tables.
- Institutions normally submitted two graduated class cohorts and two currently enrolled cohorts, to allow for examination of 4-year and recent experience.
- Data pooled from four institutional categories: Twenty private colleges and universities (37,611 student and alumni records), six public state universities (71,831 records), five minority-serving institutions (12,691 records), and two arts institutions (783 records). The six publics include two flagships, two large state universities in states with a flagship (Washington State University is one of these), a large scientific and technical university, and a minority-serving institution.
- At public universities with their "guaranteed admission" policies based on HSGPA or HS rank, we focused on calculating cumulative GPA's and graduation rates for students with testing <u>below</u> that institution's average who were beneficiaries of the policies.

Principal Findings

- There are no significant differences in either Cumulative GPA or graduation rates between submitters and non-submitters. Across the study, <u>non-submitters</u> (not including the public university students with above-average testing, to focus on the students with below-average testing who are beneficiaries of an optional testing policy) <u>earned Cumulative GPAs that were only .05 lower than submitters, 2.83 versus 2.88. The difference in their graduation rates was .6%. *By any standard, these are trivial differences*.</u>
- College and university Cumulative GPAs closely track high school GPAs, despite wide variations in testing. Students with strong HSGPAs generally perform well in college, despite modest or low testing. In contrast, students with weak HSGPAs earn lower college Cum GPAs and graduate at lower rates, even with markedly stronger testing. <u>A clear message: hard work and good grades in high school matter, and they matter a lot</u>.
- Non-submitters are more likely to be first-generation-to-college enrollees, all categories of minority students, Pell Grant recipients, women, and students with Learning Differences (LD). But across institutional types, white students also use optional testing policies at rates within low single digits of the averages, so the policies have broad appeal across ethnic groups.

College Cumulative GPA and High School GPA (students entering 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010)



College Cumulative GPA and SAT (students entering 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010)



SAT

Graduation Rates, Non-Submitters and Submitters

(students entering 2003, 2004, 2005, 2006, 2007)



Summary of Key Statistics, All 33 Institutions (students entering 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010)

	Non- Submitters	Submitters		COLOR KEY Cohen's d
n	62067	60743		< 0.1 = trivial difference
	2 45	2.00		0.1 - 0.3 = small difference
High School GPA	3.45	3.28	Cohen's d	0.3 - 0.5 = moderate difference
SAT (See caveat below)	1129	1154	Cohen's d	> 0.5 = large difference
Cumulative GPA	2.92	2.88	Cohen's d	Note: Details on Cohen's d can be found in the accompanying excel
Graduation Rate	65.8%	64.5%	Chi-Square	spreadsheet.

Without Above-Average-Testing Students

0 0				COLOD KEV
n	36648	60743	_	Chi-Square Tests
High School GPA	3.35	3.28	Cohen's d	No Significant Difference
SAT (See caveat below)	1041	1154	Cohen's d	Statistically Significant
Cumulative GPA	2.83	2.88	Cohen's d	Difference p < .000
Graduation Rate	63.9%	64.5%	Chi-Square	Note: Details on chi-square tests can be found in the accompanying
			-	excel spreadsheet.

SAT Caveat: 82.0% of Non-Submitters still submitted scores. This data only represents that 82.0%. For the second chart, the results were calculated with those students at the six public universities removed who had testing above the average of their institution. In this way, the data reflects only those students in public institutions with testing below their institutional averages who were beneficiaries of an automatic admission program based on HSGPA or HS rank,, or who chose to apply as a non-submitter in an institution that had a pure optional testing policy.

Principal Findings (Cont.)

- Non-submitters support successful enrollment planning in a broad range of ways. They expand applicant pools, apply Early Decision at higher rates, increase minority enrollments, expand geographic appeal, and allow for success by Learning Difference students.
- In a surprise finding, non-submitters display a distinct two-tail or bimodal curve of family financial capacity. First-generation, minority and Pell-recipient students will need financial aid support, but large pools of students not qualifying for or not requesting financial aid help balance institutional budgets.
- Non-submitters may commonly be missed in consideration for no-need merit financial awards, despite better Cum GPAs and markedly higher graduation rates than the submitters who receive merit awards. Institutions may want to examine their criteria for merit awards, especially the use of standardized testing to qualify students for no-need merit funding.
- LD students, from a sample of 1050 students at 8 institutions, are much more likely to apply as non-submitters, and much more likely to apply ED.
- College admissions decisions made without testing are apparently just as reliable as those made with testing. Testing may serve to artificially truncate the applicant pools of students who would succeed if they could be convinced to apply.

Principal Findings at 20 Private Institutions

- This peer comparison is based on aggregate findings from a combined total of 36,859 records.
- Non-submitter enrollees rose gradually from 26% to 35% from 2003 to 2010.
- New England has high non-submitter rates, but percentage use nationally is from 24% to 49%.
- Non-submitter rates vary modestly by school type: 30% public, 37% parochial, 38% private.
- Optional testing works as an affirmative action device, with wide appeal across ethnic categories. White non-submitters are only single percentages below the average.
- Early Decision applicants use the policy at higher rates than regular decision applicants.
- Submitters and non-submitters enter college with HS GPA's .04 apart, but SAT scores are 149 points apart. In college, non-submitters start with first-year GPA differences of .15 below submitters, but gradually close the GPA gap to .1 by graduation.
- The overall graduation rate for this aggregate is 76.9%. The non-submitter graduation rate is 1.1% higher when calculated as one aggregate pool; when calculated as an average of the 20 institutional graduation rates, the non-submitter rate is 1.9% lower. Time-to-completion rates are identical.
- HSGPAs and college comulative GPA's are highly correlated, as are EFC and SAT scores.
- Non-submitters are somewhat less likely to be STEM majors or earn Latin honors. But the differences are small: submitters favor Biology and non-submitters favor Psychology by differences of about 2%.

Non-Submitter Growth from 2003 to 2010, at 20 Private Institutions

(non-submitter students entering 2003, 2004, 2006, 2007, 2008, 2009, 2010)



Cohort Year

Non-Submitters by ED, Pell, First-Gen & Gender at 20 Private Institutions

(non-submitter students entering 2003, 2004, 2005, 2006, 2008, 2009, 2010)



Non-Submitters by Ethnicity at 20 Private Institutions (non-submitter students entering 2003, 2004, 2005, 2006, 2008, 2009, 2010)



Note: This is based on the former IPEDS categories. Students from cohorts 2009 and 2010 who selected multiple backgrounds were re-categorized as "unknown". 15

Non-Submitters by EFC at 20 Private Institutions (non-submitter students entering 2003, 2004, 2006, 2007, 2008, 2009, 2010)



Percent Non-Submitter

100%

Summary Statistics, 20 Private Institutions

(students entering 2003, 2004, 2006, 2007, 2008, 2009, 2010)

	Non- Submitters	Submitters		
High School GPA	3.47	3.51	Cohen's d	COLOR KEY
Academic Rating	6.53	6.76	Cohen's d	Cohen's d $< 0.1 = $ trivial difference
SAT (See caveat below)	1096	1245	Cohen's d	0.1 - 0.3 = small difference
First Year GPA	2.98	3.13	Cohen's d	0.3 - 0.5 = moderate difference > $0.5 =$ large difference
Cum GPA (enrolled cohorts)	3.04	3.17	Cohen's d	Note: Details on Cohen's d can be
Cum GPA (graduated cohorts)	3.08	3.18	Cohen's d	found in the accompanying excel spreadsheet.
Graduation Rate**	77.7%	76.6%	Chi-Square	
Completion Rate**	101.4%	102.2%	Cohen's d	
				COLOR KEY
Underrepresented Minority	16%	9%	Chi-Square	Chi-Square Tests
First Generation	16%	10%	Chi-Square	No Significant Difference
Gender (Female)	65%	59%	Chi-Square	Statistically Significant Difference p < .000
Pell	23%	17%	Chi-Square	Note: Details on chi-square tests
EFC	\$21,790	\$26,303	Cohen's d	can be found in the accompanying
EFC – Adjusted for Inflation	\$10,570	\$12,817	Cohen's d	excei spreaasneei.
STEM Major	24%	32%	Chi-Square	

Academic Rating: All institutions submitted their respective scales, but for comparison purposes we converted all of them to a 10 point scale, where 10 is the highest rating. SAT Caveat: Only 41% of Non-Submitters still submitted scores. This data only represents that 41%. ** Graduated cohorts only

Principal Findings at 6 Public Universities

- This peer comparison is based on aggregate cohorts from six public universities, a total of <u>71,831</u> records.
- Each public university allows for automatic admission with a certain HS GPA or class rank. They collect ACT or SAT testing from all applicants, but the students meeting the GPA or rank criteria are admitted regardless of testing scores, and thus are structurally test-optional, or "non-submitters." Students meeting the GPA/rank criteria were compared with those with lower GPA/rank for whom testing was used in the admissions decision ("Submitters"). We divided both non-submitters and submitters into sub-groups. "Top-achieving Non-submitters" have both the required HS GPA and testing above their institution's averages. "Policy Access Non-submitters" have the required HS GPA but testing below their institution's averages. "Score Underperformers" have the required GPA but testing well below their institution's averages. "Submitters" who do not meet the HS GPA criteria are divided into "Score Submitters" who meet a lower GPA criteria with a testing criteria, and "Category Admits" who did not meet either GPA or testing criteria.
- From 2003 to 2010, non-submitter enrollees declined slightly from 66% to 62%. The universities have a wide range of enrollee non-submitter rates, from 95% down to 39%.
- First-generation-to-college students, Pell Grant recipients, minority students and women enroll at higher rates under the policy. As a policy based purely on HSGPA or rank, it favors students who performed well.
- Non-submitters graduate at rates from 4.8% to 17.6% higher than submitters, depending on how the averages are calculated.. Students in both the Top Achieving and Access Admits subgroups earn higher GPAs and graduate at higher rates than any of the Submitter groups. Students in the Score Under-performer group, with SAT averages that are 240 points below the overall cohort average, graduate at a 56% rate, single digits below Score Submitters with lower HS GPAs but SATs that are 300 points higher. Score Underperformers are 45% minority and 41% first-generation.
- The automatic admission policies seem to be working well, with strong results from students with testing below class averages, and reasonable results even from the students with the lowest SAT's.

Percentage of All Non-Submitters over 4 Cohort Years at 6 Public Universities

(non-submitter students entering 2003, 2004, 2009, 2010)



Cohort Year

Policy Use by Expected Family Contribution at 6 Public Universities

(non-submitters entering 2003, 2004, 2009, 2010)



Non-submitters by Ethnicity and Citizenship at 6 Public Universities

(non-submitters entering 2003, 2004, 2009, 2010)



Note: This is based on the former IPEDS categories. Students from cohorts 2009 and 2010 who selected multiple backgrounds were re-categorized as "unknown". 21

Student Segments: Defining the Subgroups of Admit Category at 6 Public Universities

(students entering 2003, 2004, 2009, 2010)

			3	4	
	Policy Non-Submitters	Above-Average-Testing Non-Submitters	Below-Average-Testing Non-Submitters	Low-Testing Non-Submitters	
PU1	In-state GPA≥3.2	SAT≥1050	SAT<1050 or no SAT	SAT<950	
	35.8% (3643 of 10183)	23.5% (2395 of 10183)	12.2% (1248 of 10183)	4.5% (455 of 10183)	
PU2	High School GPA≥3.5	SAT≥1095	SAT<1095 or no SAT	SAT<995	
	44.4% (2799 of 6302)	25.9% (1634 of 6302)	17.4% (1165 of 6302)	8.3% (524 of 6302)	
PU3	In-state top 10%	SAT≥1300	SAT<1300 or no SAT	SAT<1050	
	51.3% (14239 of 27687)	12.7% (3507 of 27687)	38.8% (10732 of 27687)	9.1% (2506 of 27687)	
PU4	HS GPA≥2.5 or top 50%	SAT≥1030	SAT<1030 or no SAT	SAT<900	
	84.8% (7727 of 9115)	58.0% (5284 of 9115)	26.8% (2443 of 9115)	7.7% (699 of 9115)	
PU5	In-state GPA≥2.0 or top 50% Out-state GPA≥2.0 or top 33% 95.3% (14812 of 15550)	In-state SAT≥980 Out-state SAT≥1090 73.5% (11436 of 15550)	In-state SAT<980 or no SAT Out-state SAT<1090 or no SAT 21.7% (3376 of 15550)	SAT<900 5.8% (899 of 15550)	
PU6	High School GPA≥2.5	SAT≥990	SAT<990 or no SAT	SAT<800	
	75.3% (2175 of 2888)	40.3% (1163 of 2888)	35.0% (1012 of 2888)	11.1% (321 of 2888)	
Total	63.3% (45395 of 71725)	35.4% (25419 of 71725)	27.9% (19976 of 71725)	7.5% (5404 of 71725)	

Summary of Key Statistics without Above-Average-Testing Non-Submitters at 6 Public Universities

(students entering 2003, 2004, 2009, 2010)

	Non- Submitters	Submitters		
n	19976	26330		COLOR KEY
High School GPA	3.40	3.12	Cohen's d	$\frac{Cohen's d}{< 0.1 = trivial difference}$
SAT (See caveat below)	1037	1130	Cohen's d	0.1 - 0.3 = small difference
First Year GPA	2.76	2.68	Cohen's d	0.3 - 0.5 = moderate difference > $0.5 =$ large difference
Cum GPA (enrolled cohorts)	2.74	2.74	Cohen's d	Note: Details on Cohen's d can be
Cum GPA (graduated cohorts)	2.78	2.62	Cohen's d	found in the accompanying excel spreadsheet.
Graduation Rate**	67%	63%	Chi-Square	·r
Completion Rate**	112.2%	113.8%	Cohen's d	
				COLOR KEY
Underrepresented Minority	24%	15%	Chi-Square	Chi-Square Tests
First Generation	32%	22%	Chi-Square	No Significant Difference
Gender (Female)	60%	45%	Chi-Square	Statistically Significant Difference n < .000
Pell	27%	15%	Chi-Square	Note: Details on chi-square tests
EFC	\$14,825	\$17,271	Cohen's d	can be found in the accompanying
EFC – Adjusted for Inflation	\$7,409	\$8,627	Cohen's d	excei spreuasneet.
STEM Major	51%	53%	Chi-Square	

SAT Caveat: 98.9% of Non-Submitters still submitted scores . This data only represents that 98.9%.

Summary of Student Segment Statistics at 6 Public Universities

(students entering 2003, 2004, 2009, 2010)

	N's	HS GPA	SAT (CR+Math)	FY GPA	Cum GPA (Graduates Only)	Cum GPA (Students entering in Graduated Cohorts)	Graduation Rate	First Gen	Minority
All Students	71725	3.40	1135	2.83	3.15	2.81	66%	23%	15%
Non-submitters	45395	3.52	1138	2.92	3.23	2.91	68%	24%	15%
Above-Average-Testing	25419	3.58	1217	3.05	3.33	3.03	69%	18%	7%
Below-Average-Testing	19976	3.40	1037	2.76	3.09	2.78	67%	32%	24%
Low-Testing	5404	3.33	895	2.49	2.90	2.47	56%	45%	41%
Submitters	26330	3.12	1130	2.68	2.99	2.62	63%	22%	15%
Score Submitters	11526	3.10	1199	2.74	3.04	2.65	61%	16%	9%
Category Admits	14031	3.12	1070	2.63	2.94	2.57	65%	26%	20%
International Submitter*	773	3.44	1140	2.63	3.28	2.93	72%	8%	N/A

* Only PU2, PU3, PU5, and PU6 had international students

Principal Findings at 5 Minority-Serving Institutions

- This peer comparison is based on aggregate cohorts from five minority-serving colleges and universities, a total of <u>12,691</u> records.. At three of the campuses, minority students represent over 90% of their enrollment. Their GPA's and graduation rates are not as high as other institutions, but they are doing the heavy lifting, often not noticed in the prestige comparisons of the college rankings.
- Not submitting testing is more often a practical reality than a strategic decision or enrolling under a policy of automatic admission. Submitters and Non-submitters have quite different HS GPA's (3.0 versus 2.61), and a significant difference in SAT's of 183 points, though this represents Non-submitter scores from only one institution out of the five. The differences in HSGPA are largely mirrored in the college and university GPA's. Non-submitters graduate at rates 13% below submitters, 24% versus 37%.
- In all categories of HSGPA bands—both Submitters and Non-submitters—FY GPA and Cum GPA track the HS GPA. In fact, Non-submitters with HSGPA's over 3.0 graduate at higher rates than Submitters with parallel HSGPA's. The higher graduation rates for Submitters are caused by much larger numbers of Submitters in the top two GPA categories, while Non-submitters have much larger numbers lower HSGPA's.
- For students who persist to graduation, Cum GPA's are fine for both Submitters and Non-submitters. The issue is graduation rates: rates range from 65% (earned by Non-submitters with HS GPA's over 3.5) down to 15% (by Non-submitters with HS GPA's under 2.5). The driver of low graduation rates is that so many students at these five institutions have HS GPA's under 2.5: 23% have high school GPA's under 2.5, and the college graduation rates of these students are under 20%.
- Some encouraging news: In the graduated cohorts, students with HS GPA's under 2.5 made up 25% of the students, while students over 3.5 made up only 17%. In the enrolled cohorts, about five years later, students with HS GPA's under 2.5 had dropped to 20% of the class cohorts, and students over 3.5 had increased to 21% of the cohorts. So at least these institutions are enrolling students with stronger high school records.

Summary of Key Statistics at 5 Minority-serving Institutions

(students entering 2003, 2004, 2006, 2007, 2009, 2010)

	Non- Submitters	Submitters		
n	3494	9197		COLOR KEY
High School GPA	2.61	3.00	Cohen's d	Cohen's d $< 0.1 = trivial difference$
SAT (See caveat below)	791	974	Cohen's d	0.1 - 0.3 = small difference
First Year GPA	2.52	2.76	Cohen's d	0.3 - 0.5 = moderate difference > $0.5 =$ large difference
Cum GPA (enrolled cohorts)	2.43	2.69	Cohen's d	Note: Details on Cohen's d can be
Cum GPA (graduated cohorts)	2.31	2.66	Cohen's d	found in the accompanying excel spreadsheet.
Graduation Rate**	24%	37%	Chi-Square	
Completion Rate**	114%	117%	Cohen's d	
				COLOR KEY
Underrepresented Minority	51%	41%	Chi-Square	Chi-Square Tests
First Generation	42%	40%	Chi-Square	No Significant Difference
Gender (Female)	55%	59%	Chi-Square	Statistically Significant Difference p < .000
Pell	49%	43%	Chi-Square	Note: Details on chi-sauare tests
EFC	\$8,966	\$13,634	Cohen's d	can be found in the accompanying
EFC – Adjusted for Inflation	\$4,586	\$6,666	Cohen's d	excer spreuusneer.
STEM Major	5%	11%	Chi-Square	

SAT Caveat: The average for non-submitters represents only one institution that had scores for non-submitters, so it is not an accurate comparison with submitters across the institutions.

** Graduated Cohorts Only

Summary of Student Segment Statistics at 5 Minority-serving Institutions

(students entering 2003, 2004, 2006, 2007, 2009, 2010)

	N's	SAT (CR+Math)	FY GPA	Cum GPA (Graduates Only)	Cum GPA (Students entering in Graduated Cohorts)	Graduation Rate	First Gen	Minority
All Students	12691	960	2.70	3.24	2.53	32%	45%	44%
Submitters	9197	976	2.76	3.25	2.66	37%	45%	41%
	1808	1101	3.40	3.51	3.27	53%	46%	24%
>3.0 & ≤3.5	2827	971	2.84	3.22	2.70	40%	45%	42%
>2.5 & ≤3.0	2324	944	2.61	3.15	2.54	32%	44%	40%
2.5	1741	893	2.17	2.96	2.20	24%	44%	50%
No HSGPA record	497	903	2.58	3.20	2.41	34%	55%	72%
Non-Submitters	3494	790	2.52	3.23	2.31	24%	44%	5%
>3.5	224	658	3.25	3.44	3.31	65%	21%	23%
>3.0 & ≤3.5	513	713	2.84	3.38	2.95	43%	32%	39%
>2.5 & <3.0	651	697	2.56	3.17	2.48	30%	41%	45%
≤2.5	1142	774	2.10	2.97	1.97	15%	48%	55%
No HSGPA record	964	955	2.58	3.27	2.10	15%	51%	61%

"Not a victory lap but a legacy lap... The next steps?"

- Evaluate the right research tools for college outcomes. Add Cohen's d, Chi Square and scatterplots to regression (R-square) analysis.
- Examine college success using 4-year Cum GPAs and graduation rates rather than first-year GPAs as the principal yardstick. Add alumni and grad school outcomes in future studies. (See the Bates 25-year look-back study for some longer-term data.)
- Share published research on optional testing. Good models are available from Bates and Ithaca, and in Joseph Soares, ed: <u>SAT Wars: The Case for Test-Optional Admissions.</u> See also Bowen, et al, <u>Crossing the Finish Line</u>.
- Examine the twin issues of "false negatives" of low testing with potential "false positives" of high testing created by coaching.
- If 30% is the non-submitter share of enrolling students, what is the true share of false negatives created by testing, including those who are refused, attending community colleges and for-profit colleges, or not attending at all?
- An ethicist's question: if we had a medical test for a serious condition with a 30% rate of false negatives, would that be OK?
- The College Board hopes to be included in designing a national 6th-12th grade curriculum. What are the implications of this CEEB proposal?

Questions and Discussion



William C. Hiss, Principal Investigator Valerie W. Franks, Co-Author and Lead Researcher <u>whiss@bates.edu</u> 26 Hadfield Road Minot, ME 04258