GOING TEST-OPTIONAL: GATHERING EVIDENCE AND MAKING THE DECISION AT ITHACA COLLEGE

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Introduction

In recent years, a growing number of colleges and universities[1] have adopted a "test-optional admission policy" that allows students to opt out of submitting standardized test scores as a part of their admission applications. In 2012, Ithaca College joined the group and implemented a test-optional policy for the admission applications of the fall 2013 entering cohort. Ithaca College is a mid-sized four-year comprehensive private college in central New York. The College promotes experiential and integrative learning by blending performing arts, liberal arts and professional programs primarily for undergraduates.

Little research on this subject has been done by small or medium-sized comprehensive private institutions like Ithaca College. In fact, this type of school might be best suited for a test-optional admission policy. The present study is an effort to provide an institutionally-specific research example to such institutions that are considering implementation.

The study includes a literature review, an explanation as to why Ithaca College's enrollment management team decided to propose a test-optional policy, and the step by step research methodology. The study also provides a discussion of the research results that played a pivotal role in gaining institutional approval for moving the College to the test-optional policy. Lastly, the results gathered from the first test-optional cohort that enrolled in fall 2013 and conclusions for consideration in the future are presented.

Literature Review

The controversy over the validity of the use of standardized test scores in the college admission process is nothing new. The early intent of the creation of the SAT was to open the doors of higher education to students without traditionally-valued credentials; the objective testing scheme was seen as a way to "level the field". Along with this goal, colleges and universities also saw standardized testing as a way to enhance their prestige by showing that their students were highly qualified based on the test results -- not based on social class or connections (Epstein, 2009). The premise that standardized testing can effectively identify qualified students and accurately predict their future academic success justified use of these tests and led to them dominating the college admissions world in the latter half of the 20th century.

This premise, however, has become subject to severe scrutiny in recent years. The main criticism is that standardized tests are culturally biased against subgroups including racial minority groups, females, first generation students, and those from low-income strata (e.g., Zwick, 2004, 2007). Empirical studies have revealed that female students' SAT math scores are lower than males by one-third of a standard deviation while Latinos' and Afro Americans' scores are lower than whites by two-thirds and one standard deviation respectively (Rosner, 2012). The critics argue, therefore, that standardized tests structurally maintain -- or worse augment -- the already existing gap between advantaged and disadvantaged applicants, by imposing "a devastating impact on the self-esteem and aspirations of young students" (Atkinson, 2001).

Furthermore, it has been argued that standardized test measures are not only culturally biased, but that they also may not be the best predictor of future academic achievements in college. The studies have consistently found that SAT scores do not predict the college first-year GPA as effectively as other measures such as high school GPA or AP credits (e.g., Cornwell, Mustard, and Van Parys, 2012). The College Board research team has examined the incremental validity attributed to SAT scores over high school GPA (HSGPA) in predicting the first-year college GPA (FYGPA). The study used a large cross-sectional sample of data from the 2006 cohort who took the revised SAT with the newly added SAT writing section. They found that when HSGPA was taken into account, the incremental validity attributed to SAT was 0.08, which was lower than the incremental validity associated with HSGPA over SAT scores ($r = 0.09$). Because of these results, they recommended that colleges use both HSGPA and SAT scores to make the best predictions of student success (Kobrin, Patterson, Shaw, Mattern, and Barbuti, 2008).

An increasing amount of evidence, therefore, suggests that the additive power of standardized test scores in predicting students' performance in college is smaller than was once believed when high school GPA or AP credits are taken into account. However, the majority of this research evidence is provided by large testing agencies (NACAC, 2008), selective large public (*e.g.*, Cornwell, *et al.*, 2012), private research universities (*e.g.*,Wonnell, Rothstein, and Latting, 2012) or selective liberal arts colleges (*e.g*., Rask and Tiefenthaler, 2012). Little research has been conducted by smaller comprehensive colleges like Ithaca College despite the fact that such schools might be best suited for adopting a test-optional admission policy. The present study is an effort to provide a research example to this type of school in deciding whether or not to implement a test-optional policy.

Ithaca College's Test-Optional Policy Proposal

In 2009, the College's internal study revealed a high correlation between Ithaca College's admission application numbers and the number of public high school graduates in Northeast. It was forecasted by the National Center for Educational Statistics (NCES) that the Northeast market would shrink by more than ten percent between 2008 and 2018 (NCES, 2009a).

In 2009, the College decided to strategically position itself for breaking away from the predicted rapid decline of the high school graduate population in Northeast. The strategies laid out include the launch of an integrative marketing campaign around the "Ready" theme, and the strategic increase in financial aid to enroll more desirable students while raising tuition at a slower pace. Furthermore, the enrollment management team proposed a test-optional admission policy in order to increase applications not only from its primary markets, but also from more racially diverse communities. Approximately 15% of Ithaca's freshmen class was from the ALANA (African-American, Latino/a, Asian and Native American) communities in 2009 while the institutional plan aimed to grow the ANALA student population from 15% to 20% by 2020.

Research Goals

The following three research goals are formed. The first goal is to examine how well SAT math, SAT critical reading and SAT writing scores could explain students' academic performance in college after controlling for the effect of non-SAT indicators such as high school GPA or AP credits. In other words, this study wants to compare the College's results with those of previous studies in terms of the incremental validity associated with standardized test scores in predicting students' college performance after taking other effects into consideration. If this study finds an insignificant incremental validity of test scores, this would be supporting evidence for instituting a test-optional policy.

The second goal is to analyze and evaluate a crucial difference between this study and others regarding how to measure the effect of non-SAT indicators. The majority of previous studies have indicated "high school GPA" or "number of AP credits taken" as non-SAT measures used for college admission (*e.g.*, Cornwell *et al*., 2012). Smaller Colleges like Ithaca, however, often utilize a more personalized approach. For example, Ithaca College's admission office is committed to the "holistic" application review process, meaning that reviewers make an admission decision by evaluating a student's all-rounded ability with various measures such as high school GPA, class rank, transcripts, the profile of high school attended, recommendations, essays, extra-curricular activities, leadership skills, evaluation from recommended on-site interviews, and audition scores for music and theatre candidates, in addition to standardized test scores. In this study, an additional consideration is introduced. To capture a component of the "holistic review", a numerical variable called "Strength of High School Schedule" is created, which is a reviewer's evaluation on how much a student has challenged him or herself in a broad array of learning at high school. Since "Strength of Schedule" scores were not originally recorded in the computer system, reviewers were instructed to re-evaluate students' admission materials randomly selected from the fall 2007 entering cohort and to record "Strength of Schedule" scores on a ten-point scale in a Microsoft Access database created for the present study. Details are discussed in the following methodology section.

The last goal of the current study is to demonstrate that a valid research study can be done even with a smaller sample size. Previous studies used very large data sets with over 3,000 cases (*e.g.,* Wonnell, *et al.,* 2012). While it is true that the larger the sample, the smaller the sampling error, small-sized colleges may not have a large amount of historical data ready for analyses. The present study demonstrates that valid research results can be obtained from approximately 500 sampled cases (see below for details) as long as an appropriate sampling methodology is applied.

Research Methodology and Data

To ensure the objectivity of research, the research procedure was established by a cross-division project team including the Vice President of Enrollment and Communication; the Director of Enrollment Planning, the Director and Associate Director of Admission, and the Director and other members of Institutional Research.

The research methodology was well documented by the original study (Borch and Mulugetta, 2010). The project team decided that the study should focus on fall 2007 first-time full-time freshmen who were retained at Ithaca College to their fifth semester, a total of 1,387 students at the time of this study. Further, the decision was made to take a random sample of 520 (500 plus 20 additional in case of some missing data problems), stratified by gender and school when they entered the College as first-time freshmen. This sample size was chosen with the understanding that it would result in a sampling error of approximately 4% (Suskie, 1992).

Since the College has not established a data warehouse or an enterprise content management system, old students' records are still kept in paper form. Thus, photocopies of the sampled students' high school transcripts were obtained from the paper records of the Registrar's Office and reviewed by members of the Admission Office staff who are typically involved in the applicant review process. The results of this high school transcript review for each student were entered by the Admission staff into a Microsoft Access database created by Institutional

Research. The high school transcript data were then matched using SPSS to profile data already available in the fall 2007 opening enrollment files of Institutional Research as well as other data. Review of the 520 sampled students' high school transcripts revealed that 48 students should be dropped from the study due to missing or incomplete transcripts. An additional 4 students were excluded from the study because these cases show extremely large residuals above 3 standard deviations in the preliminary regression analysis. Thus, the total number of students included in this study's final analysis was 468. A complete breakdown of numbers and proportions of students by original IC school and gender who were in the initial population and in the final study analysis are provided in Table 1. The sample is slightly skewed to males in comparison to the population. However, overall the sample used for the final analysis is judged to be a reasonable representation of the population.

A list of variables studied is presented in Table 2. The majority of the variables listed are self-explanatory. However, two variables deserve special attention. As mentioned earlier, "Strength of High School Schedule" on a 10-point scale, measures a reviewer's evaluation of how much a student has challenged him or herself in a broad array of learning at high school. The intent was for this variable to capture a component of the "holistic" admission review process to which many small colleges are committed. Unfortunately, such measures have not been included in previous studies as pointed out earlier (Sternberg, 2012). In addition to conventional non-SAT measures such as high school GPA, AP credits and high school percentile rank, the inclusion of "Strength of High School Schedule" might reveal the importance of the holistic admission review process to predict a student's success in college, which might further solidify the argument for a test-optional policy.

The second significant difference is that previous studies most often used first-year GPA as a dependent variable whereas this study uses the cumulative IC GPA at the end of the 6^{th} semester which is, we believe, a more stable measurement of a student's long-term academic performance in college. Some previous studies found that high school grades are better indicators of grades beyond the freshman year in college than admission test scores (*e.g.*, Geiser, 2007).

Table 1: Students in the Population vs. in the Analysis

Fall 2007 First-time Full-time Freshmen Retained to 5th Semester

Females

Ithaca College School	Population		Sample in Analysis	
	Hdct	% of Total Population	Hdct	% of Total Sample
Business	62	4.5%	21	4.5%
Communications	172	12.4%	60	12.8%
HSHP	187	13.5%	62	13.2%
H&S*	337	24.3%	112	23.9%
Music	60	4.3%	20	4.3%
Female Total	818	59.0%	275	58.8%

Males

Ithaca College School	Population		Sample in Analysis	
	Hdct	% of Total Population	Hdct	% of Total Sample
Business	104	7.5%	34	7.3%
Communications	107	7.7%	38	8.1%
HSHP	101	7.3%	37	7.9%
H&S*	202	14.6%	65	13.9%
Music	55	4.0%	19	4.1%
Male Total	569	41.0%	193	41.2%
Grand Total	1387	100%	468	100.0%

Note: H&S includes a small number of students in the Division of Interdisciplinary and International Studies

Table 2: Variables Used in the Study

Background Variables	**Data Range**	**Data Source**
Gender	0 – 1 *(Female)*	IR*'s fall 2007 opening enrollment data file (original source: final fall 2007 Admission data file)
Ethnicity *(ALANA or not)*	O – 1 *(ALANA)*	
First Generation	O – 1 *(1st Generation)*	

Other Independent Variables	**Data Range**	**Data Source**
H.S class rank percentile	1 – 100	IR's fall 2007 opening enrollment data file (original source: final fall 2007 Admission data file)
SAT scores *(Math, Critical Reading & Writing)*	1 – 800	
Number of AP credit hours *(at entry to Ithaca College)*	1 – 800	IR's study of FTFT AP and transfer credits
H.S. academic GPA *(4-point scale; converted if not 4-point scale originally)*	1 – 4	High school transcript review
Strength of high school schedule *(10-point scale)*	1 – 10	

Dependent Variable	**Data Range**	**Data Source**
Cumulative Ithaca College GPA at end of 6th semester	1 – 4	IR's spring 2010 course enrollment data file

**IR is the Office of Institutional Research*

Statistical Models and Analysis

Hierarchical regression is chosen as the most appropriate statistical technique to investigate the questions presented above. In hierarchical regression, the order of the inclusion of independent variables is primarily determined by a researcher which differs from other multivariate regression techniques such as stepwise regression. Although detailed discussions on statistical modeling are beyond the scope of this paper, it is useful to briefly explain how this statistical technique is used in this study.

Hierarchical Regression Model 1

$$Y_j = \beta_{0j} + \beta_{1j}*(D_{1j}) + \beta_{2j}*(D_{2j}) + \beta_{3j}*(D_{3j}) + e_j$$

where j=1 (subscript j refers to the level of variables included in the model)
Y_j refers to the dependent variable, the 6th semester cumulative GPA at Ithaca College
D_{1j}… D_{3j} refer to dichotomous variables (ALANA, Gender and First Generation) in Model 1.
β_{0j} refers to the intercept of Model 1.
β_{1j} … β_{3j} refer to the beta coefficients associated with predictors D_{1j} … D_{3j}.
e_j refers to the random errors of prediction for Model 1.

Hierarchical Regression Model 2

$$Y_j = \beta_{0j} + \beta_{1j}*(D_{1j}) + \ldots + \beta_{3j}*(D_{3j}) + \beta_{4j}*(X_{1j}) + \ldots + \beta_{6j}*(X_{3j}) + e_j$$

where j=2 (subscript j refers to the level of variables included in the model)
Y_j refers to the dependent variable, the 6th semester cumulative GPA at Ithaca College
In addition to the independent variables included in Model 1,
X_{1j} … X_{3j} refer to non-SAT predictors (AP credit hours, high school GPA and Strength of Schedule).
β_{0j} refers to the intercept of Model 2.
β_{4j} … β_{6j} refer to the beta coefficients associated with predictors X_{1j} … X_{3j}.
e_j refers to the random errors of prediction for Model 2.

Hierarchical Regression Model 3

$$Y_j = \beta_{0j} + \beta_{1j}*(D_{1j}) + \ldots + \beta_{3j}*(D_{3j}) + \beta_{4j}*(X_{1j}) + \ldots + \beta_{6j}*(X_{3j}) + \beta_{7j}*(X_{4j}) + \ldots + \beta_{9j}*(X_{6j}) + e_j$$

where j=3 (subscript j refers to the level of variables included in the model)
Y_j refers to the dependent variable, the 6th semester cumulative GPA at Ithaca College
In addition to the independent variables included in Model 2,

X_{4j} ... X_{6j} refer to three SAT predictors (SAT Math, SAT Critical Reading and SAT Writing).
β_{0j} refers to the intercept of Model 3.
β_{7j} … β_{9j} refer to the beta coefficients associated with the SAT predictors.
e_j refers to the random errors of prediction for Model 3.

The focus of the hierarchical regression analysis is on the statistical significance associated with incremental change in R-square among the three models. This examines the magnitude and the statistical significance of the increment in the predictive validity attributed to the SAT scores when the predictive power associated with background variables and non-SAT evaluation measures is taken into consideration.

Results: Descriptive Statistics

Descriptive statistics are presented in Tables 3 and 4. Due to the large number of students missing high school class rank percentile data, it was decided to exclude this variable from the subsequent analyses. All predictors except for First Generation are significantly correlated with the 6^{th} Semester CUM GPA at Ithaca College. Without controlling other variables, bivariate negative correlations of ALANA and the academic measures indicate that minority students appear to have lower scores in the 6^{th} semester CUM GPA, AP credit hours and in all SAT scores. Female students tend to perform better at Ithaca College than their male counterparts. While SAT critical reading is gender neutral, male students tend to do better with SAT math scores and females score higher with SAT writing. It is important to note that High School GPA and Strength of Schedule are not significantly correlated with ALANA or First Generation status, revealing the importance of applying these measures to the admission process in order to mitigate the risk of using standardized test scores alone for college admissions. Significant correlations among the predictors indicate that caution is necessary because of a possible multi-collinearity problem in regression analysis.

Table 3: Descriptive Analysis

Variable	N	Min	Max	Mean	Std. Dev.
IC_6SEM_CUMGPA	468	2.2	4.0	3.35	0.39
ALANA	468	0	1	0.10	0.31
First generation college student	468	0	1	0.13	0.34
GENDER	468	0	1	0.59	0.49
High school class rank percentile	252	35.0	100.0	81.24	14.70
AP_CR_HRS	468	0.0	48.0	5.28	8.57
HS_GPA	465	2.0	4.0	3.38	0.46
STRENGHT_SCHEDULE	468	3.0	10.0	7.21	2.28
Max SAT verbal *(includes converted ACTV) (in 100s)*	468	3.7	8.0	5.97	0.81
Max SAT math *(includes converted ACTM) (in 100s)*	468	3.9	7.9	6.00	0.69
Max SAT writing	452	3.5	8.0	5.83	0.76

Table 4: Correlations

Variables		IC_6SEM_ CUMGPA	ALANA	FIRSTGEN	GENDER	AP_ CR_HRS	HS_GPA	STRENGTH_S CHEDULE	SATV	SATM	SATW
IC_6SEM_ CUMGPA	Pearson	1									
	Sig. (2-tailed)										
	N	468									
ALANA	Pearson	-.118	1								
	Sig. (2-tailed)	.010									
	N	468	468								
FIRSTGEN	Pearson	-.032	.155	1							
	Sig. (2-tailed)	.492	.001								
	N	468	468	468							
GENDER	Pearson	.260	.004	.035	1						
	Sig. (2-tailed)	.000	.924	.456							
	N	468	468	468	468						
AP_ CR_HRS	Pearson	.388	-.121	-.031	.023	1					
	Sig. (2-tailed)	.000	.009	.498	.614						
	N	468	468	468	468	468					
HS_GPA	Pearson	.631	-.080	.005	.207	.433	1				
	Sig. (2-tailed)	.000	.086	.908	.000	.000					
	N	465	465	465	465	465	465				
STRENGTH_ SCHEDULE	Pearson	.406	-.041	.053	.119	.489	.490	1			
	Sig. (2-tailed)	.000	.380	.255	.010	.000	.000				
	N	468	468	468	468	468	465	468			
SATV	Pearson	.356	-.116	-.090	.031	.455	.388	.302	1		
	Sig. (2-tailed)	.000	.012	.051	.503	.000	.000	.000			
	N	468	468	468	468	468	465	468	468		
SATM	Pearson	.291	-.146	-.065	-.191	.406	.292	.296	.444	1	
	Sig. (2-tailed)	.000	.002	.163	.000	.000	.000	.000	.000		
	N	468	468	468	468	468	465	468	468	468	
SATW	Pearson	.415	-.132	-.145	.102	.442	.411	.337	.697	.493	1
	Sig. (2-tailed)	.000	.005	.002	.030	.000	.000	.000	.000	.000	
	N	452	452	452	452	452	449	452	452	452	452

Results: Hierarchical Regression Analysis

The results from the hierarchical regression analysis are presented in Tables 5, 6, 7 and 8. Table 5 summarizes the explanatory power of the overall models in a hierarchical fashion. Model 1 first uses only three background measures (ALANA status, gender and First Generation status) as predictors of the sixth semester CUM GPA in college. The result indicates 0.085 R-square, indicating that 8.5% of variance of the dependent variable is successfully explained by these three dichotomous variables. Model 2, which inserts three additional non-SAT measures (AP credit hours, High School GPA and Strength of Schedule) in the equation, shows that R-square was elevated to .437. The change in R-square attributed to these additional three non-SAT measures is .353, which is highly significant. Lastly, when the three SAT scores are inserted in the equation in Model 3, the incremental change in R-square is surprisingly small at .018, although the F-test on the change is still statistically significant ($p=.002$). This finding may imply that SAT scores would not predict college academic performance as effectively as non-SAT measures.

To clarify this point, the R-square changes are further tested in another way by inserting background variables first, then three SAT scores, and lastly non-SAT measures in the equation. As presented in Table 6, the change in R-square attributed to three non-SAT scores after controlling for SAT scores is .190, ten times greater than .018, which is the change in R-square attributed to three SAT variables after considering the effects of non-SATs, as previously observed in Table 5. This affirms the finding that non-SAT measures are better than the SATs in predicting the sixth semester CUM GPA at Ithaca College.

Multiple R (or correlation coefficient R) is the square root of R-square. Multiple R measures the degree to which a group of independent variables is correlated to the dependent variable.

The change in Multiple R shows the increment in validity solely attributed to SAT scores in predicting the 6th semester CUM GPA, after the effect of the non-SAT measures as a whole is taken into account. As presented in Table 5, the increment of R of the SAT scores is small: 0.012 (the difference between .669 and .657). But that incremental value is statistically significant. This result is similar, yet more pronounced in comparison to the 2008 College Board study (Kobrin *et al.*, 2008). The College Board study found that the incremental validity attributable to the SAT was 0.08 while controlling for the effect of self-reported high school GPA to predict the college first year GPA. The finding of this study is much smaller than the conclusion of the College Board study's. We believe that this difference is due to two factors: 1) the College Board study used the self-reported high school GPA alone as a non-SAT predictor whereas Ithaca College's study used three non-SAT variables, resulting in more predictive power attributed to the non-SAT measures, and 2) the College Board study used first-year GPA as a dependent variable whereas we used the cumulative IC GPA at the end of the 6th semester which is, we believe, a more stable measurement of a student's long-term academic performance in college.

Overall predictive power of Model 1, Model 2 and Model 3 is highly significant as indicated by the ANOVA results (Table 7). Table 8 reveals further insights about the hierarchical regression analysis. Collinearity statistics indicate the existence of collinearity among the academic predictors, but it is not severe enough to discard the analysis. In Model 1, without taking any other variables into account, ALANA and gender status variables appear to be significant predictors of academic performance at Ithaca College. In Model 2, three non-SAT predictors, that is, high school GPA, AP credit hours and Strength of Schedule are statistically significant. Two observations are noteworthy. First, as mentioned earlier "Strength of

Schedule" measures a reviewer's evaluation of how much a student has challenged him or herself in a broad array of learning in high school. The statistical significance ($p<.10$) of this predictor, unique to the present study, indicates that Strength of Schedule may quantify an important characteristic that cannot be evaluated by high school GPA or AP credits. Second, when these three non-SAT predictors are added to the equation, the ALANA status becomes no longer significant, which implies the importance of use of these non-SAT measures for selecting qualified students with minority backgrounds.

When SAT scores are added to the model (Model 3), only SAT writing becomes significant in predicting students' sixth semester performance. This confirms previous findings in earlier studies that the SAT writing score is the best predictor of college academic performance among the three SAT measures (Kobrin, *et al.*, 2008). Gender, high school GPA and Strength of Schedule remain statistically significant in Model 3. The finding implies that adding only one SAT score -- SAT writing -- may marginally improve Ithaca College's ability to predict students' performance in college. High school GPAs, Strength of Schedule and Gender remain statistically significant in the projection of students' academic performance three years after enrolling at Ithaca College.

Table 5: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.291[a]	.085	.078	.37714	.085	13.695	3	445	.000
2	.661[b]	.437	.430	.29670	.353	92.331	3	442	.000
3	.675[c]	.456	.444	.29279	.018	4.956	3	439	.002

a. Predictors: (Constant), FIRSTGEN, GENDER, ALANA

b. Predictors: (Constant), FIRSTGEN, GENDER, ALANA, AP_CR_HRS, HS_GPA, STRENGHT_SCHEDULE

c. Predictors: (Constant), FIRSTGEN, GENDER, ALANA, AP_CR_HRS, HS_GPA, STRENGHT_SCHEDULE, SATM, SATV, SATW

d. Dependent Variable: IC_6SEM_CUMGPA

Table 6: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.291a	.085	.078	.37714	.085	13.695	3	445	.000
2	.515b	.265	.255	.33899	.181	36.258	3	442	.000
3	.675c	.456	.444	.29279	.190	51.162	3	439	.000

a. Predictors: (Constant), FIRSTGEN, GENDER, ALANA

b. Predictors: (Constant), FIRSTGEN, GENDER, ALANA, SATV, SATM, SATW

c. Predictors: (Constant), FIRSTGEN, GENDER, ALANA, SATV, SATM, SATW, AP_CR_HRS, HS_GPA, STRENGHT_SCHEDULE

d. Dependent Variable: IC_6SEM_CUMGPA

Table 7: ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	5.843	3	1.948	13.695	.000[b]
	Residual	63.293	445	.142		
	Total	69.136	448			
2	Regression	30.227	6	5.038	57.229	.000[c]
	Residual	38.909	442	.088		
	Total	69.136	448			
3	Regression	31.502	9	3.500	40.829	.000[d]
	Residual	37.635	439	.086		
	Total	69.136	448			

a. Dependent Variable: IC_6SEM_CUMGPA

b. Predictors: (Constant), FIRSTGEN, GENDER, ALANA

c. Predictors: (Constant), FIRSTGEN, GENDER, ALANA, AP_CR_HRS, HS_GPA, STRENGHT_SCHEDULE

d. Predictors: (Constant), FIRSTGEN, GENDER, ALANA, AP_CR_HRS, HS_GPA, STRENGHT_SCHEDULE, SATM, SATV, SATW

Table 8: Coefficient Analysis

Model		Unstandardized B	Unstandardized Std. Error	Standardized Beta	t	Sig.	Correlations Zero-order	Correlations Partial	Correlations Part	Collinearity Tolerance	Collinearity VIF
1	(Constant)	3.240	.029		113.402	.000					
	ALANA	-.132	.060	-.101	-2.203	.028	-.105	-.104	-.100	.985	1.015
	GENDER	.215	.036	.270	5.949	.000	.269	.271	.270	.999	1.001
	FIRSTGEN	-.042	.054	-.035	-.770	.442	-.038	-.036	-.035	.984	1.016
2	(Constant)	1.735	.112		15.510	.000					
	ALANA	-.070	.047	-.053	-1.473	.141	-.105	-.070	-.053	.972	1.029
	GENDER	.121	.029	.152	4.142	.000	.269	.193	.148	.947	1.056
	FIRSTGEN	-.045	.043	-.038	-1.059	.290	-.038	-.050	-.038	.980	1.021
	AP_CR_HRS	.005	.002	.120	2.800	.005	.388	.132	.100	.697	1.435
	HS_GPA	.417	.037	.490	11.322	.000	.623	.474	.404	.681	1.469
	STRENGTH_SCHEDULE	.016	.008	.092	2.090	.037	.412	.099	.075	.654	1.528
3	(Constant)	1.260	.174		7.259	.000					
	ALANA	-.052	.047	-.040	-1.099	.272	-.105	-.052	-.039	.960	1.041
	GENDER	.131	.030	.165	4.336	.000	.269	.203	.153	.859	1.165
	FIRSTGEN	-.020	.043	-.017	-.467	.641	-.038	-.022	-.016	.955	1.048
	AP_CR_HRS	.003	.002	.063	1.397	.163	.388	.067	.049	.605	1.654
	HS_GPA	.383	.038	.449	10.159	.000	.623	.436	.358	.634	1.576
	STRENGTH_SCHEDULE	.013	.008	.074	1.690	.092	.412	.080	.059	.645	1.550
	SATM	.042	.025	.073	1.649	.100	.294	.078	.058	.633	1.579
	SATV	.004	.025	.009	.173	.863	.369	.008	.006	.470	2.130
	SATW	.058	.027	.113	2.122	.034	.418	.101	.075	.440	2.272

a. Dependent Variable: IC_6SEM_CUMGPA

New Evidence from the First Test-Optional 2013 Cohort

The above research was completed in fall 2010 whereas the Ithaca College's test-optional policy was officially announced in spring 2012. The research results played a pivotal role in gaining institutional approval for moving Ithaca College to a test-optional policy in 2012 for admission of the 2013 entering cohort.

In one of his recent publications, Ithaca College President Rochon wrote, “We expected that eliminating standardized tests as a required element of the application would enable us to increase the number of highly qualified applicants to the college, increase the quality of the enrolled freshman class, and increase the diversity of that class. And we fared well against those goals.” (Rochon, 2013).

In fact, the College’s freshman applications increased by more than 13% in 2013. ALANA applications surged by more than 23% while the non-ALANA group was up by 10%. Twenty-eight percent of the total applicants opted out from the submission of SAT scores. 40% of ALANA applicants chose to opt out of the test score submission while 23% of non-ALANA students selected this option. A chi-square test indicates the test-optional difference between ALANA and non-ALANA students is highly significant.

Furthermore, when high school GPA and class rank were used to measure the academic quality of the applicants, average high school GPA was slightly lower than the previous year by .02 point while class rank average was identical to the class of 2012.

Building upon this robust application base, Ithaca College successfully enrolled 1789 freshmen, 89 students more than the goal of 1700. The 2013 class is the most diverse in the College’s history; that is, students with minority backgrounds account for 22% of the freshman class in comparison to 18% of the previous year. Ithaca’s research team plans to conduct a follow-up study by measuring academic performance of the 2013 class who opted out of SAT submission in comparison to those who did not. More detailed analysis on this topic will be presented in the near future.

Conclusion

Ithaca College, a mid-sized four-year private college in central New York, successfully implemented a test-optional policy in 2012 for admission of the 2013 entering cohort. This study has discussed research methodology and results which played a pivotal role in gaining institutional approval for moving the College to the test-optional practice. To date, little research on this subject has been done by smaller comprehensive institutions like Ithaca College, which promotes experiential and integrative learning by combining theory and practice primarily for undergraduates. Such schools could be best suited for instituting a test-optional admission policy. This study shares useful research information with the institutions considering implementation of a test-optional admission policy.

Using 468 cases which were stratified and randomly selected from the fall 2007 entering cohort, the study investigated the incremental validity of SAT scores in predicting the 6th semester cumulative GPA in college when the effects of background variables (minority, gender, and first generation status) and non-SAT predictors (High School GPA, AP credits, and Strength of High School Schedule) were statistically taken into consideration.

Hierarchical regression analysis was conducted, which allowed us to insert three background variables at first, then three non-SAT predictors, and finally three SAT scores in the equation. The change in R-square attributed to three non-SAT measures was 35.3%. In contrast, the incremental R-square change associated with three SAT scores was only 1.8% although the F-test on the change was statistically significant. Even with the relatively small sample, this finding confirms the results of previous large studies, indicating that standardized tests add relatively small power in predicting students' academic performance in college.

The present study has also revealed the critical importance of Strength of Schedule along with high school GPA and AP credits in the admission process if an institution does indeed decide to implement a test-optional policy. These non-SAT measures seem to play a particularly significant role in admitting qualified students from minority groups.

By instituting a test-optional policy coupled with other strategies, Ithaca College successfully increased applications by more than 13% in 2013 compared to one year ago, while maintaining the essentially identical academic quality of applicants. ALANA applications surged by more than 23% and as a result, the fall 2013 freshman class is the most diverse in its history, with 22% of the class from minority groups. Ithaca College's experience indicates that adopting a test-optional policy could be one good practice to foster diversity on campus while maintaining race-neutral admission policies. More research is needed to link test-optional and race-neutral admission policies as society intensely debates the issue of admission policies.

Notes

1. Approximately 850 institutions were test-optional schools in 2012, according to *SAT Wars: The Case for Test-Optional College Admissions*, edited by J. A. Soares, Teachers College, Columbia University, New York and London.

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