Assessing the Rigor of HS Curriculum in Admissions Decisions: A Functional Method, plus Practical Advising for Prospective Students and High School Counselors,

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Abstract

An extensive, internally cross-validated analytical study using Multilevel Modeling (MLM) on 4,560 students identified functional criteria for defining high school curriculum rigor and further determined which measures could best be used to help guide decision making for marginal applicants. The key outcome used in MLM analyses was a composite variable including first year GPA and hours completed per term, which proved to relate well with predictors. These consistent findings guided the design of a Criteria Decision Matrix and a set of advising tools that has been shared with and well received by Florida high school guidance counselors.

Introduction and Background

The 2008 – 2012 Strategic Plan for the University of South Florida (USF) committed to increasing the academic profile and quality of new freshmen admitted to and enrolling in the university's research campus, USF located in Tampa. For the strategic plan, academic quality is measured by average high school grade point average (GPA), nationally standardized test scores and the number of finalists in the national Merit, Hispanic and Achievement programs who enroll at USF. Concurrently, the university committed to increase the percentage of first-generation-to-college students and Pell recipients while also increasing the retention and graduation rates of students at USF. In the admission decision, nationally standardized test scores often benefit students from more affluent socioeconomic communities while local and national research suggests that the SAT Reasoning Test and the ACT are not strong predictors of first year academic success at USF.

Enrollment Planning and Management (EPM), the Office of Undergraduate Admissions (OUA) and the Office of Decision Support Services (DSS) identified three questions that are critical in improving the admission decision process at USF:

1) How predictive are high school GPAs and/or nationally standardized test scores in predicting student academic success during the freshman year at USF?
2) Are there other quantifiable admission data that could enhance predicting student academic success?
3) How could Undergraduate Admission introduce these new factors in an clearly understandable and efficient manner to the admission decision process for freshman applicants as well as provide additional resources for college admission counseling during high school?

To date, the Office of Undergraduate Admission at USF has received more than 29,000 freshman applications for the 2009-10 entering class and is targeted to enroll 4,200 students. Because of the budget cuts to higher education in Florida since July 1, 2007, OUA has lost nine full-time positions and almost $500,000 in operating resources. Currently, only four full-time and two temporary staff are dedicated to the initial review and evaluation of these admission files.

Background and Discussion

Many factors have been supported over time as key indicators of student performance in higher education. Among these, perhaps the most ardent arguments occur regarding what exactly reflects high school course rigor. Definitions of rigor abound. For example,

Mathematics has been espoused as a gatekeeper for advancement since the days of Plato (Stinson, 2004). Research regarding high schools is replete with recommendations for improving the rigor of high school curricula. Among the most informative are Adelman (1999, 2004, 2006). NCCHE (1998) puts responsibility on students and parents: "…preparation for college starts with families and students working together on the academic preparation necessary for a successful college experience. The first semester of the senior year is too late to begin laying this foundation. Families and students must begin with a solid foundation in elementary school. The next step is taken when they begin to plan for a rigorous course of study in high school, preferably one that involves four years of college-preparatory English and mathematics, and three years each of science, history and social studies, and foreign language."

Despite the vast literature and research on this topic, systematic curricula rigor criteria based on rigorous empirical research are not to be found. This research succeeded in developing a simple definition of rigor for this purpose.

Methods

The primary mystery driving this research may be stated: is it possible, given the information available to the Admissions office when an FTIC student applies, to effectively divide applicants into three groups?

1. those who will almost surely succeed at USF and therefore be automatic admits,
2. those who will likely not perform adequately at USF and would therefore be automatic denials, and,
3. those who may do well, but require more intensive evaluation before an effective decision can be made.

To investigate this question, first year performance at USF (three outcome variables) was related to all data available to the Admissions office at application time (35 predictor variables). Outcome variables included a student's USF GPA, the number of hours completed and a composite combining both GPA and hours (GPA/HRS). The composite divided both variables into eight ordinal categories using percentage of the sample (12.5% at each levels) and summed the resultant assigned values (from 0 for the lowest to 7 for the highest 12.5%) for each of GPA and hours. Because some entering students enroll in both the summer and fall semesters during their first year while others enroll only in the fall, the GPA/HRS variables used hours per semester, with summer semester weighted 0.67 of fall.

Sample

Data were available for 4,560 USF FTIC students who matriculated in either the summer or fall semesters of 2007. The sample used for Multilevel Modeling (MLM) was limited to the 4,190 students from Florida who were also U.S. citizens to avoid confounds that might result from small sample influences (aliens & non-residents).

Considerable redundancy occurs for high school performance activities such as Advanced Placement courses (AP), AP credits and dual enrollment credits. Some 71% of 2,285 students who took dual enrollment courses also took AP courses, while 76% of 2,135 students who took AP courses also dual enrolled.

It was not possible to obtain a second sample of cases to evaluate shrinkage effects. When using optimizing statistical procedures (e.g. multivariate), one obtains a best fit for the data submitted to analysis. The reduction in prediction that occurs when a fitted model is applied to a different sample is called shrinkage. It is therefore vital, when conducting analyses involving multiple predictors to evaluate shrinkage. For that reason, the 4,190 total MLM sample was randomly divided into two sub-samples, with Sample I (N=2,500), the fitted sample consisting of about 60% of the available cases, and Sample II (N=1,790), the test sample, consisting of the remaining 40%.

To select for inclusion in the MLM analysis, a preliminary scan used Spearman R_{Ranks} correlations to estimate relationships between possible predictors and GPA/HRS. In this preliminary scan, only the magnitude of a relationship is of interest. In general, only variables exhibiting at least an $R_{Ranks} >= .15$ were included in the model. However, sex, race/ethnicity and being from a low SES USF target school were also included to assess any impacts on outcomes. Note that HS GPA should have a strong relationship with USF GPA if for no other reason than method variance (same measure), and that AP and dual enrollment credits earned should have relationships with USF credits earned because they contribute to this variable.

The results of this preliminary analysis (Table 1) suggest that few items will contribute much once the variance accounted for by high school GPA is removed from the model.

Table 1
Spearman Rank Correlation Coefficients Between GPA/HRS and Possible Predictors for 4,190 Florida, non Alien USF Students

Predictor Variable	R_{Ranks}
Included in Modeling	
HS GPA	0.48
N of AP Credits	0.35
AP or not	0.30
Honors Courses or not	0.29
ACT Composite	0.28
Dual Enrolled or not	0.28
ACT Math	0.27
Highest SAT/ACT score	0.26
ACT Writing II	0.25
SAT Total	0.24
STEM Units	0.24
SAT Writing	0.23
Math Units	0.23
Total Units	0.23
ACT Science	0.22
SAT Quantitative	0.22
SATMCSUB	0.22
SAT Critical Reading	0.21
ACT Reading	0.20

Predictor Variable	R_{Ranks}
Language Units	0.17
SAT Essay	0.17
Natural Science Units	0.15
Application Month	0.15
Female or not	0.06
Hispanic or not	-0.02
African American or not	-0.11
Asian or not	0.06
White or not	0.05
Excluded from Modeling	
Soft Units	0.13
Foreign Language Units	0.12
ACT Writing II	0.12
Social Science Units	0.11
English Units	0.10
Dual Credits Earned	-0.01
Elective Units	-0.02

Time of Application

Investigation into application times indicated that students who applied earlier were more likely to have higher GPAs, AP credits and Honors courses, than were later applicants. This suggests that any analysis using application time will be confounded by these high school accomplishments.

Nesting within Academic Disciplines

In these analyses, students were nested within disciplines, because knowledge, writing, methods of argument, approaches to solving problems, what is viewed as evidence and even thinking is frequently discipline specific (Hoffman, *et. al.*, 2007). Sometimes these elements differ substantially even within a broad discipline. When using MLM for such analyses, greater numbers of nesting groups (e.g. broad disciplines) increases the power to detect differences. It is also wise to assure that a reasonable number of cases (e.g. 50 or more) occurs in each broad discipline to ensure the reliability of MLM Empirical Bayes (EB) estimates. At USF, 22 two-character Classification of Instructional Program broad disciplines occurred in this sample, with undeclared (Undergraduate Studies) being the largest (circa 1,000 cases). In order to create adequately large broad discipline groupings, some smaller disciplines were combined with "similar" larger ones: 03 Renewable Natural Resources (28) with 26 Biological Sciences (N=253)[1], 44 Public Administration (6) with 45 Social Sciences (N=243), 27 Mathematics (22) with 40 Physical Sciences (N=105), 11 Computer Sciences (4) with 14 Engineering (N=409), 24 Liberal Studies (11), 38 Philosophy/Religion (8), and 54 History (27) with 16 Languages (N=51). This resulted in 15 broad discipline groups. Any combination of disciplines can be critiqued, here, the basis for combination was "reasonable similarity."

Results

MLM Analyses and Findings

No Intra Class Correlation (ICC) of any magnitude (e.g. above .05) occurred in any MLM analyses. This suggests that most students, although theoretically nested in disciplines, this early in their college careers, are primarily taking General Education courses or introductory discipline courses so the cultural and thinking differences that occur between and among disciplines (Hoffman, *et al*, 2007) do not have much influence. Further supporting this, running a random MLM model rather than a fixed one did not improve any model. This indicates that a single regression line fits across all disciplines rather than each discipline having a different slope and intercept.

Despite the lack of nesting differences, MLM remains a good analytical approach due to its robustness to various measurement factors that are prevalent in these sorts of data, such as extremely asymmetric variable distributions (e.g. units earned).

Table 2 provides ***t*** values obtained for important predictors in the best fit models for each of the outcomes submitted to analysis:

1. GPA/HRS (cross validated using Sample 2),
2. USF GPA and
3. USF Hours earned per term.

[1] Combined N of multiple disciplines.

The results for the GPA/HRS variable were consistent across both samples, indicating the validity of these values. Interestingly, the SATACT concordance scores, when predicting USF GPA, have a negative coefficient (and **t**). This apparently results from the impact of females on this model, who tend to have lower test scores, but higher grades than males (Micceri, 2007). The most important predictors for the combined variable beyond high school GPA are

1. having taken an AP Course,
2. having Dual Enrolled, and
3. having earned more STEM units (math or natural sciences), or
4. having earned more Language units (English and foreign language), or
    a. having earned more total units.

Having earned either more AP hours, or any AP Credits was not a contributor to the GPA/HRS model. However, it was in the USF GPA best fit model. Note in the ***r*** and **R** rows, that the GPA/HRS prediction exhibits a higher values than one usually obtains with such data. A multiple **R** of .50 translates to mean that roughly half of one's student rankings using the predictors on a sample will be correct. This is an unusually high value in predicting college effects from high school performance variables and indicates that the inclusion of the other variables shown contributes usefully to the prediction model.

Table 2

t Values of Strongest Predictor Variables in Best Fit Models for Outcomes

	GPA/HRS		GPA	Hours
	Sample 1 (df=2419)	Sample 2 (df=1639)		
HS GPA	21.46	12.27	16.55	7.69
Took AP Course	4.34	4.87	5.17	7.97
Dual Enrolled	4.51	4.36		2.11*
N of STEM Units	4.81	3.53		6.63
N of Language Units	3.11	4.11		
N of Total Units	3.09	2.05*		
N of AP Credits			6.82	
SATACT	1.55*	1.17*	-4.03	3.46
Being Female			1.37*	
Full Model[2] r and R^2				
r	0.48	0.50	0.39	0.41
R^2	0.23	0.25	0.15	0.16

* Not Significant, yet a contributor to a Full Prediction Model. Due to the multiplicity inherent to MLM analyses, only $p < .001$ is accepted as significant.

High School GPA (HS GPA) was by far the strongest simple and multivariate predictor of outcomes. However, high school course rigor used in combination with GPA proved the strongest tool for identifying a student's likelihood of success at USF, where success

[2] These estimated values are computed using a formula in Luke (2004).

or lack thereof is defined as earning either above a 3.0 GPA or below a 2.0 GPA. MLM analyses guided the research to four yes/no rigor criteria that proved effective at classifying success:

1. having taken at least one AP course (not, however, earning AP credits),
2. having taken at least one Dual Enrollment course (not, however, credits earned),
3. having more than a minimum number of STEM units - more than 6, 7, or 8 units (depending on desired selectivity) in mathematics and physical science, and
4. having more than a minimum in languages - more than 6 units in English and Foreign Languages.0

The combined STEM and Language variables proved more effective than their separate components at providing useful cuts They also give larger samples at various cut points, thereby increasing the reliability of these criteria.

MLM identified total units earned as being almost equal to STEM and Language units, in predicting USF performance, however, too much variability occurred in total units to readily set a minimum yes/no type rigor criterion.

The highest of SAT or ACT total scores (SATACT) although a non-significant predictor, did contribute very slightly to predicted performance (R^2 moved from .23 to .24). Additionally, USF has several identified local low SES Target Schools, and coming from one of these did not relate to student performance (Table 4).

Details

Table 3 shows that among students who complete any two of the rigor criteria and earn a 3.5 or higher HS GPA (N=2,295), there is at worst a 13% chance they will earn less than a 2.0 USF GPA. For those with a 3.9 or higher HS GPA (N=1,205) this probability drops to between 1.6% and 11%. Either of these criteria are good choices for automatic admission with at least an 87% chance of a passing GPA.

For automatic denials, Table 3 demonstrates that students completing none of the four rigor criteria, no matter what their HS GPA, exhibit greater percentages below a 2.0 GPA at USF than do even those who meet only one criterion. As an example, 10 of the 12 students [83%] who met no criteria but entered with a 4.3 or higher HS GPA earned less than a 2.0 GPA. On average, across all HS GPA levels 45% of the cases included in this table meeting no criteria (N=531) had a 2.0 or lower USF GPA. Overall, as Figure 1 shows, the percentage of all students earning below a 2.0 at USF by the number of criteria met were respectively, zero (43%[3]), one (28%), two (16%), three (13%), and four (10%). Similar trends held true for those below a 2.5 GPA, and the reverse was true for 3.0 or higher because the more criteria met, the more likely one is to earn a higher USF GPA. One caveat to setting automatic denials in this way is that 30.6% of those who met no criteria earned a 3.0 or higher GPA at USF. However, meeting one criterion raised that percentage to 39%, while meeting two raised it to 50%. Doubtlessly, any denial method will exclude worthy students. But this method appears to effectively reduce erroneous rejections, and increase likely successes.

Methods to apply for marginal cases will probably depend on the number of applicants who meet various rigor criteria. Having a 3.5 or higher HS GPA appears a likely cut

[3] For the complete sample, N=553.

point for investigating marginal cases. As Table 3 shows among all students meeting only one criterion with a 3.5 or higher HS GPA, 24.5% had below a 2.0 (N=477). Among those having a 2.7-3.49 HS GPA in this group, 31.4% had below a 2.0 (N=411). Only 27 students met one or more criterion and had a HS GPA below 2.7. Those meeting two or more criteria with above a 3.5 GPA never have more than 13% below a 2.0 GPA. This 3.5 or higher GPA appears to hold up no matter how many criteria a student meets, and generally, as the number of criteria met increases, the higher the HS GPA, the lower the percentage below 2.0.

The most likely marginal cases would appear to be those meeting one criterion and having a 3.5 or higher HS GPA (N=477), and those below a 3.5 HS GPA having met two or more criteria (N=750). Those students range from 24.5% (one criterion and 3.5 or higher HS GPA) and 28.6% below a 2.0 GPA. This is above the overall average of 19.6%, but is not unreasonably high. Also, 48% of those with a 3.5 or higher GPA and meeting one criterion had a USF GPA above 3.0. Among those with lower HS GPAs and two or more criteria, roughly 30% earned a 3.0 or higher GPA. It is likely that more rigorous analyses of specific applications in these groups can help select more from the above 3.0 group and fewer from below the 2.0 group.

Because all of those meeting these definitions of marginal would have met at least one rigor criterion, the following may be used to guide more intensive decisions:

- The more total units, the better.
- The more STEM units, the better.
- The more AP credits, the better.
- The more Language units, the better.
- The higher the SAT/ACT equivalent score, the better (for Status purposes).
- Honors Courses also proved somewhat beneficial in the model.

Regarding SAT/ACT, although this did not exhibit much predictive capacity in these data, nonetheless, the advantage to taking a student with an 1100 SAT over one with the same criteria and HS GPA but only a 950 SAT is simply that imbecilic publications like US NEWS America's Best Colleges will rank USF higher for having the higher test score.

Caveats

First, as was noted above, even among those meeting no rigor criteria, 31% earned a USF GPA of 3.0 or higher, thus, some worthy applicants will be denied no matter what criteria one applies. Second, ideally findings should be cross-validated on the 2008 FTIC cohort to assure that they are not merely idiosyncratic to this cohort's specific characteristics. Third, the redundancy (multicolinearity) that occurred among several of the more important predictors could impact the model. However, the consistency of the derived criteria suggests that this was not an important factor here.

Four Rigor Criteria

Table 3 displays by the total number of met rigor criteria across HS GPA. Due to the limited number of cases in the no GPA and 2.0 to 2.6 groups, those were eliminated from this table to provide a picture of trends less influenced by small sample idiosyncrasies (the only remaining extremely small samples were 12 in the None by 4.3 to 5.0, 27 in the One by 4.3 to 5.0). The percent of students having below a 2.0 USF GPA shows a clear drop as one moves from left to right (None to Four criteria met), and, once

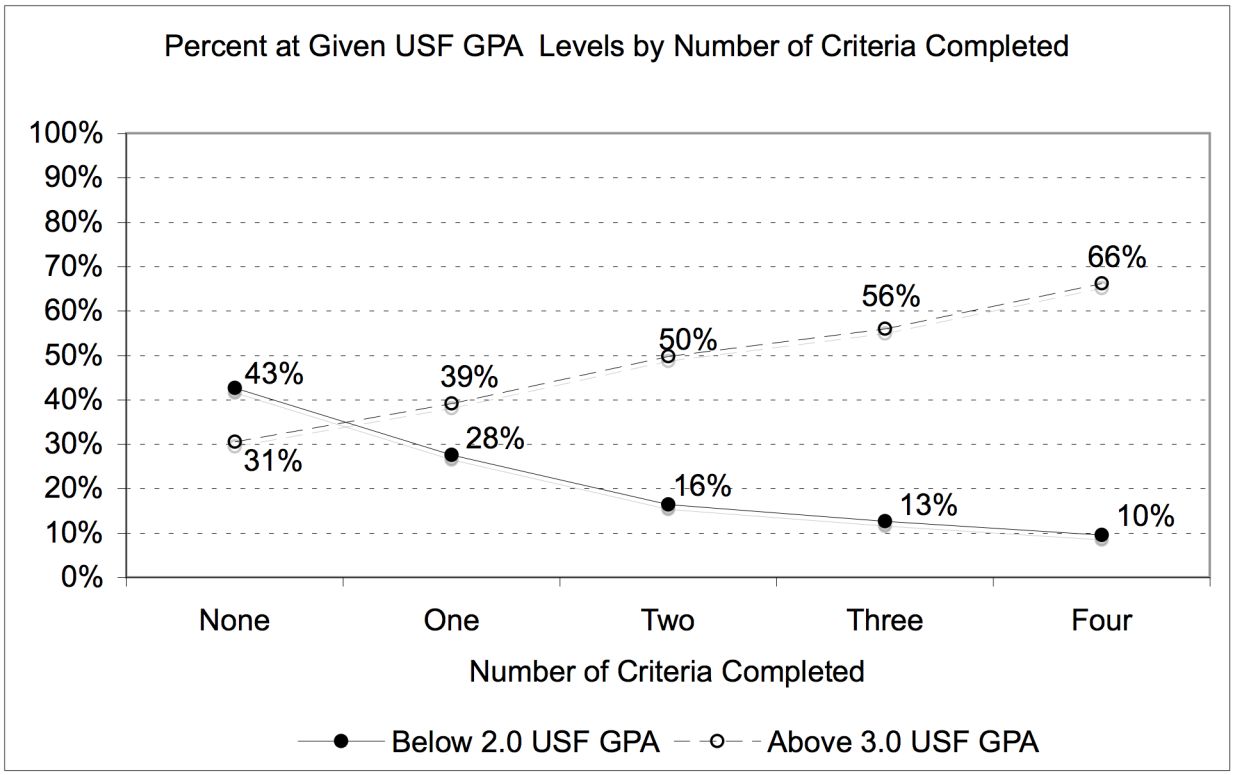
one has met at least two criteria, from lower HS GPA to higher. The fact that 10 of the 12 students having HS GPAs between 4.3 and 5.0, but having met none of the criteria had a USF GPA below 2.0 is somewhat sobering, and suggests that no single criterion taken alone, even the one having the strongest relationship with USF GPA, HS GPA, can accurately project a student's level of performance at USF.

Table 3
Performance at USF by Number of Identified Criteria Completed Across HS GPA

High School	All	None	One	Two	Three	Four
GPA	Number of Cases					
All	4,457	524	888	1,061	1,116	868
2.7-3.0	321	71	89	81	60	20
3.1-3.4	1,085	174	322	275	215	99
3.5-3.8	1,579	179	310	413	386	291
3.9-4.2	1,075	88	140	238	338	271
> 4.3	397	12	27	54	117	187
	Percent below USF GPA 2.0					
All	19.6%	45.2%	27.6%	16.4%	12.6%	9.6%
2.7-3.0	35.2%	47.9%	28.1%	29.6%	38.3%	35.0%
3.1-3.4	29.4%	40.8%	32.3%	25.1%	22.3%	27.3%
3.5-3.8	17.5%	38.5%	22.3%	12.8%	13.0%	12.0%
3.9-4.2	11.8%	44.3%	27.1%	9.7%	4.7%	4.1%
> 4.3	7.3%	83.3%	37.0%	11.1%	1.7%	1.6%
	Percent at or above USF GPA 3.0					
All	50.0%	30.6%	39.2%	49.8%	56.0%	66.2%
2.7-3.0	19.9%	12.7%	25.8%	21.0%	20.0%	15.0%
3.1-3.4	32.4%	29.9%	29.8%	37.1%	34.0%	29.3%
3.5-3.8	48.2%	36.3%	45.2%	50.1%	49.0%	55.0%
3.9-4.2	68.4%	44.3%	54.3%	67.6%	73.7%	77.5%
> 4.3	83.4%	25.0%	44.4%	75.9%	88.0%	92.0%

Figure 1 depicts the comparatively large and consistent drop off in the percentage below 2.0 and increase in the number at 3.0 or higher as the number of criteria met increases.

Figure 1



Effects of Target School

Regarding the percentage of students who earned below a 2.0 at USF, Table 4, shows that no difference exists between students enrolled from target schools (lower SES schools) and non-target schools.

Table 4

Percent of Students from Target and Non-Target Schools with Below a 2.0 USF GPA

	N		Percent	
	Non-Target	Target	Non-Target	Target
N	2,961	1,552		
Below a 2.0 USF GPA	584	301	19.7%	19.4%
Above a 2.0 USF GPA	2,377	1,251	80.3%	80.6%

Different Levels for STEM Criterion

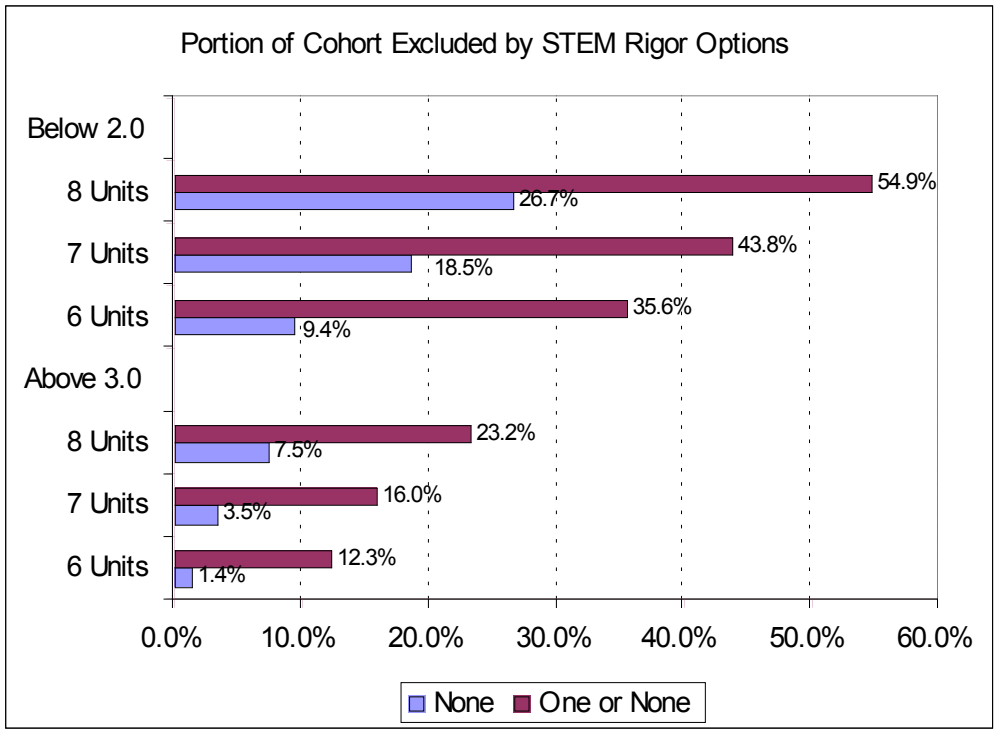
Table 5 demonstrates the different effects of setting STEM criteria at more than 6, 7, and 8 units. The first column is excluded cases for each rigor criterion. For the six units, zero criteria, 147 cases would be excluded (3.3% of the total population for whom data were available 4,513). This would cause a reduction in the number remaining in the population who scored below 2.0 of 9.4%, and a reduction among those scoring above 3.0 of 1.4%. The greatest number excluded would be 8 units with one or fewer rigor criteria. This is 1,458 students, or 32.3% of the population, with a 55% reduction of those scoring below a 2.0 and a 22% reduction of those scoring above a 3.0.

Table 5
Specific Numbers and Percentages of Change for Three STEM Definitions

N STEM Units	N	Percent of Cohort	< 2.0 N	< 2.0 Percent Reduction	> 3.0 N	> 3.0 Percent Reduction
Totals	4,513		885		2,257	
Exclude Those Meeting No Rigor Criteria						
6 Units	147	3.3%	802	9.4%	31	1.4%
7 Units	323	7.2%	721	18.5%	80	3.5%
8 units	553	12.3%	649	26.7%	169	7.5%
Exclude Those Meeting One or Fewer Rigor Criteria						
6 Units	833	18.5%	570	35.6%	277	12.3%
7 Units	1,066	23.6%	497	43.8%	360	16.0%
8 units	1,458	32.3%	399	54.9%	524	23.2%

Figure 2 graphically presents the data in Table 5 and perhaps better depicts the population gains and losses for using none or one or less rigor criteria for the three STEM Unit criteria. Although using one or less shows very large gains in excluding those below 2.0, unfortunately, it triples the percentage of population above 3.0 that is lost (23% is 3 times 7.5%).

Figure 2

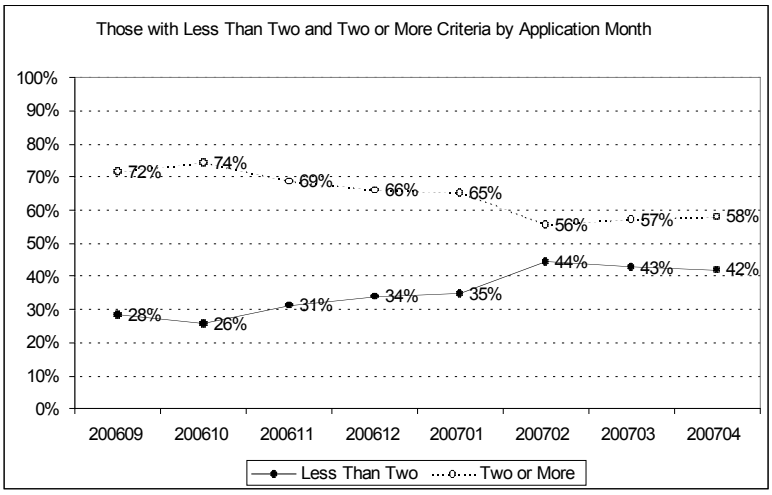


These analyses suggest that only in exceptional circumstances should those in the zero rigor criteria be admitted, and those meeting only one should probably be thoroughly evaluated before being admitted. Table 3 indicates that the “thorough” evaluation

approach should also be applied for those having below a 3.5 HS GPA no matter how many rigor criteria they have met.

Although time of application was neither a significant nor an important predictor in the full model, this may have resulted from its colinearity with other factors like AP and Dual Enrollment courses and HS GPA among other factors, therefore, an analysis was conducted looking at the percentage of students meeting two or more rigor criteria versus those meeting fewer than two by application month. Figure 3 displays these effects and shows that the percentage with two or more criteria drops from around 73% in September and October to between 56% and 58% from February through August (note that May, June, July and August applicants were combined into April [200704] due to their small sample sizes. This is roughly a 67% reduction. Again, it appears that earlier applicants exhibit slightly higher qualifications than later ones.

Figure 3



Summary of Key Findings

High School GPA (HS GPA) was by far the strongest simple and multivariate predictor of outcomes. However, high school course rigor used in combination with GPA proved the strongest tool for identifying a student's likelihood of success at USF, where success or lack thereof is defined as earning either above a 3.0 GPA or below a 2.0 GPA. MLM analyses guided the research to four yes/no rigor criteria that proved effective at classifying success:

1. having taken at least one AP course (not, however, earning AP credits),
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Table 3 shows that among students who complete any two of the rigor criteria and earn a 3.5 or higher HS GPA (N=2,295), there is at worst a 13% chance they will earn less

than a 2.0 USF GPA. For those with a 3.9 or higher HS GPA (N=1,205) this probability drops to between 1.6% and 11%. Either of these criteria are good choices for automatic admission with at least an 87% chance of a passing GPA.

For automatic denials, the no rigor criterion appears the strongest decision tool.

Marginal cases will include all with only one rigor criterion and all below 3.5 GPA. The following appear to best guide more thorough evaluation of marginal cases:

- The more total units, the better.
- The more STEM units, the better.
- The more AP credits, the better.
- The more Language units, the better.
- The higher the SAT/ACT equivalent score, the better (for Status purposes).
- Honors Courses also proved somewhat beneficial in the model.

Despite the lack of predictive usefulness, the advantage to taking a student with an 1100 SAT over one with the same criteria and HS GPA but only a 950 SAT is simply that imbecilic publications like US News America's Best Colleges will rank USF higher.

Implementation

This research demonstrated that multiple factors are more predictive of student success in their freshman year at USF than only the use of nationally standardized test scores or in the traditional combination with high school GPA. From an admission perspective, students who earned a high school GPA of 3.40 or higher were likely to be successful as freshmen at USF if they also demonstrated at least two of the factors measuring the rigor of their high school curricular experience. To incorporate these findings into the admission decision process at USF, Undergraduate Admissions introduce a third dimension, Academic Success Predictors, to enhance its existing model for evaluating freshman applications.

The seven Academic Success Factors (ASFs) are enrollment in more than one 1) Advanced Placement (AP) or International Baccalaureate (IB) courses; 2) dual enrollment courses during high school; completion of additional units beyond the minimum required by the State of Florida for admission to a state university in 3) math (state required three through 2009), 4) science (state requires three) or 5) foreign language (state requires two); and/or, 6) a postsecondary GPA through dual enrollment of 2.50 or higher. A seventh factor was included based on emerging national research identifying the greater value of the SAT Writing and ACT English/Writing subscores in predicting freshman academic performance [NACAC Commission on the Use of Standardized Testing chaired by Bill Fitzsimmons of Harvard University].

To reinforce the messages of Florida high school guidance counselor about the importance of a rigorous high school curriculum in preparation for college, USF published and distributed an advising brochure distributed at the beginning of the 2008-09 recruitment season to the counselors. To be transparent to the target audience of prospective students and families, this information is also available on the Undergraduate Admission website and a visual presentation is provided at http://usfweb2.usf.edu/Admissions/pdf/counselor-grid.pdf.

Because USF can only admit between 40% and 45% of its freshman applicants, the admission decision grid reflects the increasingly competitive nature of the process. However, standardized test scores above state minimum levels for remediation are insignificant in the admission process for students whose high school GPA and Academic Success Predictors are at or above the mean of the entering class.

The outcome of this enhanced admission process will only be written with the enrollment and success of the 2009-10 freshmen class at USF. However, as we monitor the process, there are two important observations to date. USF's admitted class of freshmen for 2009-2010 is the strongest class in terms of high school GPA, rigor of curriculum and standardized test scores.

Equally important from a Strategic Plan perspective, the percentage of ethnic minority students, Black, Hispanic, Asian and American Indian, in the 2009-10 admitted freshman class has increased to 35% compared to 32% in the 2008-09 class.

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