Office of Institutional Research and Assessment

Southeastern Full-Time Freshmen Cohort Success Predictors

Research Brief # 32   Summer 2010

Higher education research consistently shows that undergraduate success is related to High School GPA and ACT Score. These two basic measures, along with several others, are reviewed for Southeastern. Additional variables considered are: whether or not Undecided Major, Sex, Race, and Campus Residency. For this brief, student success is defined as fall-to-fall retention. The basic question for this brief is: What measure or combination of measures has some predictive value in terms of fall-to-fall retention?

Procedure and Data: The student group for this study is the First-Time Full-Time Freshmen Cohort for the terms fall 2006 through fall 2008.

The averages for the two basic admissions measures of the three cohorts are displayed in the table below.

Cohort	Count	Average ACT	Average High School GPA
2006	2,673	21.1	3.043
2007	2,533	21.2	3.056
2008	2,622	21.4	3.076

The three cohorts were combined and the scores computed. The ACT average is 21.2 and the High School GPA is 3.060. The combined cohort is divided into two separate groups: the returning group and the non-returning group. The basic descriptive measures for the returning and non-returning groups are presented in the table below.

Percent Returning Fall	Average Returning ACT	Returning High School GPA	Percent Not Returning Fall	Average Not Returning ACT	Returning High School GPA
64.5%	21.6	3.168	35.5%	20.6	2.859

Multiple Regression was used to identify the extent to which the variables of the study help explain whether or not students are retained. The summary results are found on the next page.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.290[a]	.084	.084	.458
2	.295[b]	.087	.087	.457
3	.297[c]	.088	.088	.457

a. Predictors: (Constant), High School GPA1

b. Predictors: (Constant), High School GPA1, Living on Campus

c. Predictors: (Constant), High School GPA1, Living on Campus, ACT - Composite

Three variables were filtered out as not being predictors: Undecided Major, Sex, and Race.

From the above table we see that the single best predictor of the six included in this study is High School GPA. However, two other variables, Living on Campus and ACT Composite, have some additional influence. Model number 3 from the summary table above explains 8.8% of the variance of fall-to-fall retention. This is not surprising since from an ACT research report[1] high school grades and ACT scores should carry about the same weight because each is equally good at predicting the likelihood of fall-to-fall retention.

At Southeastern and for the three years of this study high school gpa is the better single predictor of success. The R-square value (0.084) indicates that about 8.4% of the variance in the returning combined cohort is explained by high school gpa (model 1). Model 3 explains only 8.8% of the variance. An interplay of other variables must be present and unaccounted for in this brief to explain additional variance in fall-to-fall retention.

Footnotes:
1- ACT Research and Policy Issues, 2008, The Relative Predictive Validity of ACT Scores and High School Grades in Making College Admission Decisions.

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