Fall 2010 Freshman Cohort Retention Report

Executive Summary

This report summarizes the retention of 1,654 students in the University of South Alabama (USA) Fall 2010 first-time full-time baccalaureate degree seeking freshman cohort. The retention rate for the Fall 2010 freshman cohort was 65%. Results indicated retention of students with lower high school GPAs and students with lower ACT Composite scores is a concern. As with the Fall 2007, Fall 2008, and Fall 2009 cohorts,

Similarly, students who had an ACT Composite score of 20 or lower persisted at rates lower than the cohort retention rate (65%). The mean difference between retention of students with a high school GPA of 3.51 or higher in comparison to all other high school GPA groups was statistically significant. Except for students with an ACT Composite score of 22-29, the mean difference between retention of students with an ACT Composite score of 30 or higher in comparison to all other ACT Composite score groups was also statistically significant (see Appendix: ANOVA Tables).

Environmental Variable Cross-Tabular Results

For the environmental variables included in this analysis, persistence rates illustrated that receiving scholarships positively affected retention (see Table 2). Students receiving a freshman scholarship (74%) or other scholarship (67%) persisted at rates higher than the cohort retention rate (65%). Additionally, the mean difference between students who received a freshman scholarship compared to students who did not receive a freshman scholarship was statistically significant (see Appendix: Independent T-Test Tables).

Table 2: Comparisons of Environmental Variables to Fall 2010 Cohort Retention Rate

Variable	Retention Rate >= 65%	Count	Retention Rate < 65%	Count	* F

Finally, in terms of the orientation session attended, persistence rates of students who attended the May orientation session and the first three Freshman Summer orientation sessions were higher than the persistence rate of the overall cohort (75%). Persistence rates based on the orientation session attended ranged from a high of 76 percent for students who attended the Freshman Session I orientation to a low of 45 percent for students who attended either the August or a Transfer orientation session.[9] When using the August Transfer orientation session as a comparison group, there was a significant mean difference between the August Transfer orientation sessions in comparison to all other orientation sessions (see Appendix: ANOVA Tables).

Outcome Variable Cross Tabular Results

The outcome variables incorporated into this analysis included the number of hours earned through Summer 2011 at USA and the USA GPA through Summer 2011. Unsurprisingly, as the number of USA hours earned increased the

significant variables that contribute to the classification of individuals by using an algorithm to determine the importance of predictor variables. Stepwise logistic regression was used to identify significant variables in the model for predicting the outcome variable. Results of the final step for the model are reported including the classification rate for the model. Additionally, an analysis of the proportionate change in odds for significant variables is provided.

As a part of this study, three logistic models were tested. The first model included the input variables. The second model included the input variables and the environmental variables. The third model tested the outcome variables which were number of USA hours earned through Summer 2011 and USA GPA through Summer 2011 to see what happened when these outcomes were used as predictors of retention.

The number of students (selected cases) included in each model varied based on what variables were included in the final model. Some students in the cohort had missing data, typically high school GPA and/or ACT Composite score. Because complete cases were required to compute the results, the final number of students used for each model ranged from a low of 1,473 students for the first and second models to a high of 1,621 students for the third model. The retention .

Table 5: Input Model Final Variables in the Equation

	B	S.E.	Wald	df	Sig.	Exp(B)

Table 7: Input and Environmental Model Final Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)	95% C.I.for EXP(B)	
								Lower	Upper
Step 1[a]	HS_GPA 2.5 or lower			69.449	3	.000			
	HS_GPA 2.51-3.0	.300	.243	1.526	1	.217	1.350	.839	2.173
	HS_GPA 3.01-3.5	.654	.236	7.663	1	.006	1.924	1.211	3.057
	HS_GPA 3.51-4.0	1.403	.235	35.269	1	.000	4.065	2.565	6.441

For the third model (see Table 9), only hours earned at USA was significant. The third model showed the odds (Exp B) of a student returning were greater for students with more hours earned (6-12=2.941, 12.5-18=5.551, 18.5-24=25.152, 24.5-30=63.247, 30.5 or more=32.579) than for students with six or fewer hours earned by Summer 2011. Furthermore, confidence intervals (95%) for all USA hours earned comparison groups did not encompass an odds value less than one.

Table 9: Outcome Model Final Variables in the Equation

	B	S.E.	Wald

Table 10: Five Year Retention Rate Peer Comparisons * Ranked by 2008 Cohort Retention Rate * High to Low

Institution Name	2008 Cohort Retention	2007 Cohort Retention	2006 Cohort Retention	2005 Cohort Retention	2004 Cohort Retention
University of Central Florida	87	86	84	82	83
University of South Florida-Main Campus	86	88	81	81	82
Auburn University Main Campus	86	87	86	87	85
Virginia Commonwealth University	83	85	82	81	80
University of Alabama	83	84	87	85	86
Georgia State University	83	82	82	79	80
University of Texas at Dallas	83	82	81	80	82
University of North Florida	83	78	77	78	75
University of Alabama at Birmingham	82	80	75	75	77
Florida International University	81	81	84	78	75
Old Dominion University	80	80	73	76	77
University of Houston	79	79	77	76	77
Texas State University-San Marcos	79	77	74	76	74
East Carolina University	79	76	77	79	76
Florida Atlantic University	79	75	74	73	72
University of West Florida	79	71	73	75	74
University of Alabama in Huntsville	76	77	77	77	75
University of North Texas	76	75	74	76	75
University of Memphis	76	75	73	72	71
University of Missouri-Kansas City	74	76	71	70	68
Louisiana Tech University	74	72	72	72	72
University of Texas at El Paso	71	70	68	68	68
Wichita State University	70	72	67	70	69
East Tennessee State University	70	67	69	71	69
University of New Orleans	69	69	69	79	-
University of South Alabama	67	67	70	72	70
Lamar University	66	65	66	60	61
University of West Alabama	65	62	71	62	65
University of Texas at Arlington	65	60	61	62	69
Texas A & M University-Corpus Christi	62	59	60	58	60
University of Texas of the Permian Basin	61	54	62	57	59
Auburn University at Montgomery	58	61	54	63	57

Note: Hurricane Katrina impacted the University of New Orleans 2004 cohort retention rate.

Source: National Center for Education Statistics IPEDS Data Center

Implications

Based on what we know about a student before the student steps foot on campus (input variables), the retention of students with lower high school GPAs and students with lower ACT Composite scores is a concern. This prompts further reflection regarding admission standards and the allocation of resources to support at risk students.

When we look at the institutional and other support provided to a student (environmental variables), like with the Fall 2007, Fall 2008, and Fall 2009 cohorts, the orientation session students in the Fall 2010 cohort attended provided a significant predictor of student persistence, with students attending the earlier Freshman Summer orientation sessions more likely to persist than students attending the later orientation

sessions. The orientation session attended by students continues to provide a key factor for identifying at-risk freshmen students early in their college experience.

In addition, past IRPA studies have looked at the contribution of freshmen scholarships to recruitment and retention goals. As with earlier studies, the importance of awarding freshman scholarships for students was clear. Additional merit based freshman scholarships should also be considered in order to attract top students to the institution since the data suggests students with freshman scholarships are also very likely to return to continue their studies at USA the following year.

Future Retention Research

This report is the first of two retention studies about the Fall 2010 freshman cohort that will be completed by Institutional Research, Planning & Assessment during the Fall 2011 semester. The second retention study will use National Student Clearinghouse data to explore the issue of "Where did USA Fall 2010 freshmen non returning students go?" This study will determine how many non returning freshmen students transferred to another college or university or "stopped out" of college altogether.

Housing * Independent Samples Test

		Levene's Test for Equality of Variances	t-
Housing			

ANOVA Tables

Age * Multiple Comparisons

Returned

Games-Howell

(I) Age	(J) Age	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval

Region * Multiple Comparisons

Returned

Games-Howell

(I) Region	(J) Region	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Mobile or Baldwin County	Rest of Alabama	-.012	.029	.998	-.09	.07
	Mississippi Service Area	.042	.043	.927	-.08	.16
	Florida Service Area	-.051	.055	.943	-.21	.11

ACT Composite * Multiple Comparisons

Returned

Games-Howell

(I) ACT	(J) ACT	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
18 or lower	19-20	-.077	.042	.458	-.20	.04
	21-23	-.110	.041	.075		.01
	24-26	-.137*				

95% Confidence Interval	
Lower Bound	Upper Bound

USA Peer Comparison Group

Institution Name	City	State
Auburn University at Montgomery	Montgomery	AL
Auburn University Main Campus	Auburn	AL
East Carolina University	Greenville	NC