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, the orientation session the student attended provided a significant predictor of student persistence. Students attending the earlier Freshman Summer orientation sessions were more likely to persist than students attending the later orientation sessions.

Overview

The following report provides a detailed analysis about the retention of the 1,654 first-time full-time baccalaureate degree seeking freshmen students in the University of South Alabama (USA) Fall 2010 freshman cohort. Retention in the context of this report is defined as whether or not freshmen students persisted and enrolled one year later in the Fall 2011 semester. Similar to reports written by Institutional Research, Planning & Assessment about the Fall 2007, Fall 2008, and Fall 2009 freshman cohorts, the input-environment-outcome (IEO) model developed by Alexander W. Astin[1] was used as a conceptual framework to guide this analysis[2].

Cross tabular results for each variable and whether or not the student returned are reported. Comparisons for each subgroup are made to the overall retention rate of the cohort (65%). Significant mean differences for the input, environmental, and outcome variables are also indicated.

Additionally, three logistic regression models were tested. The first model included the input[3] variables. The second model included the input and the environmental[4] variables. The final model included two outcome[5] variables. The predictive power of each model for explaining whether or not the student returned (Yes/No) is reported as well as which variables were significant in each of the three models.

Cross Tabular Results

Cross tabular results for each variable and whether or not the student returned are summarized in the following section. Comparisons are made for each subgroup of the variable to the retention rate (65%) of the 1,654 freshmen in the cohort. These comparisons illustrate which subgroups of students persisted at higher, similar, or lower rates than the overall cohort retention rate of 65 percent. In addition, significant mean differences for the input, environmental, and outcome variables are reported.

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[1] Astin, A. W. (2002). *Assessment for excellence: The philosophy and practice of assessment and evaluation in higher education*. American Council on Education, Oryx Press.

[2] University of South Alabama Fall 2007 Freshman Cohort Retention Report available for reference at http://www.southalabama.edu/irpa/highpriority/fall07cohortfreshretenreport.pdf

[3] Input variables: Gender, race/ethnicity, age, region, high school GPA, and ACT Composite score.

[4] Environmental variables: Freshman scholarship, other scholarship, housing, Freshman Seminar, college, and orientation session attended.

[5] Outcome variables: USA hours earned and USA GPA.

Input Variable Cross Tabular Results

For the input variables included in this analysis (see Table 1), female students (69%) persisted at a higher rate than male students (61%) and the retention rate mean difference was statistically significant (see Appendix: Independent T-Test Tables). In terms of race/ethnicity, African-American students (61%) and students included in the "Other" race/ethnicity subgroup[6] (60%) persisted at a rate lower than the cohort retention rate (65%). The mean difference between retention of Asian students to White students, African-American students, and students in the "Other" race/ethnicity subgroup was statistically significant (see Appendix: ANOVA Tables).

Table 1: Comparisons of Input Variables to Fall 2010 Cohort Retention Rate

Variable	Retention Rate >= 65%	Count	Retention Rate < 65%	Count
**Gender*				
	*Female (69%)	906	Male (61%)	748
**Race/Ethnicity*				
	*Asian (84%)	61	African-American (61%)	392
	Non-Resident Alien (77%)	43	Other (60%)	78
	Hispanic (76%)	37		
	White (66%)	1,043		
Age				
	17 years old or younger (68%)	105	19 years old (62%)	143
	18 years old (67%)	1,312	21 years old (60%)	10
			20 years old (55%)	33
			22 years or older (49%)	51
Region				
	International (77%)	43	Mississippi Service Area (61%)	152
	Rest of United States (70%)	92		
	Florida Service Area (70%)	76		
	Rest of Alabama (66%)	399		
	Mobile or Baldwin County (65%)	892		
**High School GPA*				
	*3.51-4.0 (79%)	687	3.01-3.5 (62%)	443
			2.51-3.0 (52%)	331
			2.25-2.5 (47%)	70
			2.24 or lower (40%)	45
**ACT Composite Score*				
	*30 or higher (86%)	63	19-20 (63%)	324
	27-29 (75%)	150	18 or lower (56%)	232
	24-26 (69%)	332		
	21-23 (67%)	389		
Note: *Significant mean difference at .05 p level based on Independent T-Test for two group comparisons or at least one group with significant mean difference at .05 p level based on Games-Howell procedure for multiple group comparisons. Significantly different group indicated by orange fill color. Comparison group indicated by "*" and gray fill color.				

Retention comparisons based on age showed students who were 19 or older persisted at rates less than 63 percent. Comparisons based on what region the student came from showed students from the Mississippi service area (61%) were least likely to return.

Finally, as high school GPA or ACT Composite score declined, retention decreased. Students who had a high school GPA of 3.5 or lower persisted at rates lower than the rate for the overall cohort (65%).

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[6] Due to the small number of students with a Hawaiian/Pacific Islander, Multiracial, Native-American, or Unknown IPEDS race/ethnicity, these four subgroups were combined into an "Other" race/ethnicity group.

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 27-29, 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[7] (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
**Freshman Scholarship*				
	*Yes (74%)	716	No (59%)	938
Other Scholarship				
	Yes (67%)	253		
	No (65%)	1,401		
Housing				
	On campus (67%)	834	Off campus (64%)	820
Freshman Seminar				
	No (66%)	829		
	Yes (65%)	825		
College[8]				
	Allied Health (71%)	292	Arts & Sciences (64%)	643
	Business (70%)	132	Engineering (62%)	210
	Education (66%)	89	Computer Science (52%)	50
	Nursing (65%)	238		
**Orientation Session*				
	Summer Session 1 (76%)	270	Summer Session 5 (59%)	315
	Summer Session 3 (73%)	255	*August/Transfer Sessions (45%)	216
	Summer Session 2 (71%)	265		
	May Session (68%)	63		
	Summer Session 4 (65%)	270		

Note: *Significant mean difference at .05 p level based on Independent T-Test for two group comparisons or at least one group with significant mean difference at .05 p level based on Games-Howell procedure for multiple group comparisons. Significantly different group indicated by orange fill color. Comparison group indicated by "*" and gray fill color.

Students living on campus (67%) persisted at a higher rate than students living off campus (64%). Students who took Freshman Seminar in Fall 2010 persisted at a slightly lower rate (65%) than students who did not take Freshman Seminar (66%). Retention comparisons based on the college housing the major the student initially selected showed Allied Health (71%), Business (70%), and Education (66%) students persisted at a higher rate than the overall cohort (65%).

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[7] Other scholarship includes third party private scholarships that are not considered a USA Freshman scholarship.

[8] Continuing Education retention is not reported since there was not a student from Continuing Education in this cohort.

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 (65%). Persistence rates based on the orientation session attended ranged from a high of 76 percent for students who attended the Freshman Session one orientation to a low of 45 percent for students who attended either the August or a Transfer[9] orientation session. When using the August/Transfer orientation sessions 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 persistence rate also increased (see Table 3). Similarly, students with a higher USA GPA were more likely to return than students with a lower USA GPA. However, students with a USA GPA of 3.01-3.5 had a slightly higher retention rate (89%) than students with a USA GPA of 3.51-4.0 (88%).

Students who completed 18.5 or more hours through Summer 2011 persisted at a higher rate (at least 74%) compared to students completing 18 or fewer hours (at most 38%). The mean difference for students who completed 30.5 or more hours at USA compared to students in all other USA hours earned groups was statistically significant (see Appendix: ANOVA Tables).

Students with a USA GPA of 2.01 or higher through Summer 2011 persisted at a higher rate (at least 75%) than the cohort rate (65%) while students with a USA GPA of 2.0 or lower persisted at a much lower rate (33%). Moreover, the mean difference for students who had a USA GPA of 2.0 or lower compared to students in all other USA GPA groups was statistically significant (see Appendix: ANOVA Tables).

Table 3: Comparisons of Outcome Variables to Fall 2010 Cohort Retention Rate

Variable	Retention Rate >= 65%	Count	Retention Rate < 65%	Count
**USA Hours Earned*				
	*30.5 or more (94%)	461	12.5-18 (38%)	164
	24.5-30 (88%)	381	6.5-12 (25%)	153
	18.5-24 (74%)	264	0-6 (10%)	198
**USA GPA*				
	3.01-3.5 (89%)	292	*2.0 or lower (33%)	530
	3.51-4.0 (88%)	260		
	2.51-3.0 (80%)	298		
	2.01-2.5 (75%)	241		
Note: *At least one group with significant mean difference at .05 p level based on Games-Howell procedure for multiple group comparisons. Significantly different group indicated by orange fill color. Comparison group indicated by "*" and gray fill color.				

Logistic Regression Results
The focus of the study was to determine which student characteristics (inputs) and environmental characteristics (institutional/other support characteristics) can be used to best predict the persistence of USA freshmen students. Since the focus of this study was prediction and classification of a dichotomous outcome variable, stepwise logistic regression was used. This technique allows for the identification of

[9] Five students attended one of three Transfer orientation sessions held in the evening to accommodate adult/working students. Since the persistence rates were similar for the August orientation group and the Transfer orientation group, the two groups were combined for this analysis.

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 rate for this subset of 1,473 students was 66 percent. With a similar retention rate (66% compared to 65%) and 1,473 students representing 89 percent of the entire cohort, the models tested provided a solid representation of retention for this population. Since the focus for the models tested was to predict *returning* students, the outcome was coded with students not returning as a "0" and students *returning* as a "1". This focus meant results would predict the odds of whether the student would *return* one year later.

Model 1: Logistic Regression with Input Variables Only
The first model consisted of three steps (see Table 4). The final step (step 1) of the first model showed the model correctly classified students in this cohort who returned 95.7 percent of the time and students who did not return 11.5 percent of the time for an overall classification rate of 67.5 percent.

Table 4: Input Model Classification Table[a]

Observed			Predicted		
			Returned		Percentage Correct
			No	Yes	
Step 1	Returned	No	57	437	11.5
		Yes	42	937	95.7
	Overall Percentage				67.5

a. The cut value is .500

For each variable included in the first model, a comparison group was selected (gender=male, race/ethnicity=White, age=18, region=Mississippi service area, high school GPA=2.5 or lower, and ACT score=18 or lower). Values greater than "1" (Exp *B*) indicated the odds of the outcome (student *returning*) were higher compared to the selected comparison group. Values less than "1" indicated the odds of the outcome (student *returning*) were lower compared to the selected comparison group.

In the first model (see Table 5), high school GPA was significant in the final step of the model (step 1). The final step of the model showed the odds (Exp *B*) of a student *returning* were greater for students with a higher high school GPA (2.51-3.0=1.501, 3.01-3.5=2.262, and 3.51-4.0=5.077) than for students with a high school GPA of 2.5 or lower. Additionally, the confidence intervals (95%) indicated that except for students with a high school GPA of 2.51-3.0 (CI=.949-2.374), the odds of a student *returning* were greater for students with a higher high school GPA than for students with a high school GPA of 2.5 or lower since the confidence intervals did not encompass an odds value less than one (3.01-3.5 CI=1.449-3.531, 3.51-4.0 CI=3.269-7.886).

Table 5: Input 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			95.564	3	.000			
	HS_GPA 2.51-3.0	.406	.234	3.007	1	.083	1.501	.949	2.374
	HS_GPA 3.01-3.5	.816	.227	12.908	1	.000	2.262	1.449	3.531
	HS_GPA 3.51-4.0	1.625	.225	52.303	1	.000	5.077	3.269	7.886
	Constant	-.305	.203	2.255	1	.133	.737		

a. Variable(s) entered on step 1: HS_GPA.
b. Comparison group for HS_GPA=2.5 or lower.

Model 2: Logistic Regression with Input and Environmental Variables

The second model included the input and also the environmental variables. For each environmental variable included in the second model a comparison group was selected (whether the student received a freshman scholarship=no, whether the student received an "other" scholarship=no, whether the student took freshman seminar=no, orientation session attended=August/Transfer orientation sessions, whether the student lived on or off campus=off campus, and which college housed the major the student selected at initial enrollment=Arts & Sciences). In comparison to the first model, the correct classification rate for the second model (see Table 6) decreased to 91.1 percent for *returning* students while the classification rate for the second model increased to 25.3 percent for students who did not return. The overall correct classification rate for the second model was 69.0 percent.

Table 6: Input and Environmental Model Classification Table[a]

Observed			Predicted: Returned No	Returned Yes	Percentage Correct
Step 1	Returned	No	125	369	25.3
		Yes	87	892	91.1
	Overall Percentage				69.0

a. The cut value is .500

The second model consisted of one step (see Table 7). Similar to the first model, high school GPA was significant in the final model. The final version (step 1) of the second model showed the odds (Exp *B*) of a student *returning* were greater for students with a higher high school GPA (2.51-3.0=1.350, 3.01-3.5=1.924, and 3.51-4.0=4.068) than for students with a high school GPA of 2.5 or lower. The confidence intervals (95%) indicated that except for students with a high school GPA of 2.51-3.0 (CI=.839-2.173), the odds of a student *returning* were greater for students with a higher high school GPA than for students with a high school GPA of 2.5 or lower since the confidence intervals did not encompass an odds value less than one (3.01-3.5 CI=1.211-3.057, 3.51-4.0 CI=2.567-6.447).

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	95% C.I.for EXP(B) 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	35.695	1	.000	4.068	2.567	6.447
	August/Transfer			46.727	6	.000			
	May Orientation	1.752	.418	17.583	1	.000	5.765	2.542	13.073
	Freshman Session 1	1.420	.245	33.540	1	.000	4.135	2.558	6.685
	Freshman Session 2	1.269	.242	27.412	1	.000	3.556	2.212	5.719
	Freshman Session 3	1.363	.242	31.593	1	.000	3.908	2.429	6.285
	Freshman Session 4	1.158	.236	24.073	1	.000	3.183	2.005	5.056
	Freshman Session 5	.916	.229	15.959	1	.000	2.500	1.595	3.919
	Constant	-1.256	.271	21.573	1	.000	.285		

a. Variable(s) entered on step 1: Orientation.
b. Comparison group for HS_GPA=2.5 or lower and Orientation=August/Transfer.

In relation to the orientation session attended, the odds of a student *returning* were the greatest for students attending the earlier Freshman Summer orientation sessions. Students attending the earlier orientation sessions had greater odds for *returning* than a student who attended the August/Transfer orientation sessions (May=5.765, Summer 1=4.135, Summer 2=3.556, Summer 3=3.908, Summer 4=3.183, Summer 5=2.500). Additionally, no orientation session had a confidence interval with an odds ratio that captured an odds value less than one.

Model 3: Logistic Regression with Outcome Variables Only

Since outcomes of student success are different from inputs (student characteristics or institutional/other support characteristics), the third model only included the outcomes of interest: number of hours earned through the Summer of 2011 and the USA GPA the student attained through the Summer of 2011. The first and second models can be used based on data known before or at least early on after the student comes to campus. However, this third model can only be used after Summer 2011 has ended.

For the third model a comparison group was selected for the number of hours earned and the USA GPA the student attained through the Summer of 2011 (number of hours earned=0-6 hours and USA GPA=2.0 or lower). Compared to the other two models the correct classification rate for the third model (see Table 8) decreased to 88.8 percent for *returning* students. However, in comparison to the other two models the correct classification rate of the third model dramatically increased to 73.1 percent for students who did not return since this snapshot was based on data representing Summer 2011 student success outcomes instead of pre-Fall 2010 student and institutional or other support characteristics. The overall correct classification rate for the third model was 83.6 percent.

Table 8: Outcome Model Classification Table[a]

Observed			Predicted: Returned No	Predicted: Returned Yes	Predicted: Percentage Correct
Step 1	Returned	No	394	145	73.1
		Yes	121	961	88.8
	Overall Percentage				83.6

a. The cut value is .500

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 (6.5-12=2.941, 12.5-18=5.551, 18.5-24=25.152, 24.5-30=63.247, 30.5 or more=132.579) 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	df	Sig.	Exp(B)	95% C.I.for EXP(B)	
								Lower	Upper
Step 1[a]	USAHoursEarned (0-6)			473.398	5	.000			
	USAHoursEarned (6.5-12)	1.079	.301	12.839	1	.000	2.941	1.630	5.306
	USAHoursEarned (12.5-18)	1.714	.285	36.097	1	.000	5.551	3.174	9.711
	USAHoursEarned (18.5-24)	3.225	.274	138.230	1	.000	25.152	14.692	43.058
	USAHoursEarned (24.5-30)	4.147	.283	215.275	1	.000	63.247	36.345	110.059
	USAHoursEarned (30.5 or more)	4.887	.304	258.447	1	.000	132.579	73.065	240.569
	Constant	-2.186	.236	85.922	1	.000	.112		

a. Variable(s) entered on step 1: USAHoursEarned.

b. Comparison group for USA Hours Earned=0-6 hours.

Peer Comparisons

Finally, to gain a better idea about how USA retention rates compared to retention at peer institutions, the National Center for Education Statistics (NCES) Integrated Postsecondary Education Data System (IPEDS) Data Center was used to compare retention at USA to 31 peer institutions[10] (see Table 10). A five year retention rate trend based on the latest available retention rate data in IPEDS showed USA had lower retention rates than most peer institutions over this five year time period. The USA retention rate over this five year time period ranged from a low of 67% for the 2007 and 2008 freshman cohorts to a high of 72% for the 2005 freshman cohort. The retention rate of peer institutions over this five year time period ranged from a low of 54% for the 2006 Auburn University at Montgomery freshman cohort and 2007 University of Texas of the Permian Basin freshman cohort to a high of 88% for the 2007 University of South Florida-Main Campus freshman cohort.

[10] List of 31 IPEDS Peer Institutions used is included at the end of the Appendix.

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), 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), just 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.

APPENDIX

Independent T-Test Tables

Gender * Independent Samples Test

Gender		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	T	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Returned	Equal variances assumed	36.804	.000	-3.157	1652	.002	-.074	.023	-.120	-.028
	Equal variances not assumed			-3.142	1561.285	.002	-.074	.024	-.120	-.028

Freshman Scholarship * Independent Samples Test

Freshman Scholarship		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Returned	Equal variances assumed	160.773	.000	-6.290	1652	.000	-.147	.023	-.193	-.101
	Equal variances not assumed			-6.384	1610.782	.000	-.147	.023	-.192	-.102

Other Scholarship * Independent Samples Test

Other Scholarship		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Returned	Equal variances assumed	1.824	.177	-.645	1652	.519	-.021	.033	-.085	.043
	Equal variances not assumed			-.651	352.000	.515	-.021	.032	-.084	.042

Housing * Independent Samples Test

Housing		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	T	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Returned	Equal variances assumed	7.639	.006	-1.388	1652	.165	-.032	.023	-.078	.013
	Equal variances not assumed			-1.387	1649.483	.166	-.032	.023	-.078	.013

Freshman Seminar * Independent Samples Test

Freshman Seminar		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Returned	Equal variances assumed	.122	.727	.175	1652	.861	.004	.023	-.042	.050
	Equal variances not assumed			.175	1651.904	.861	.004	.023	-.042	.050

ANOVA Tables

Race * Multiple Comparisons
Returned
Games-Howell

(I) Race	(J) Race	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval Lower Bound	Upper Bound
White	African-American	.046	.029	.596	-.04	.13
	Asian	-.180*	.050	.007	-.33	-.03
	Hispanic	-.101	.073	.737	-.32	.12
	Non-Resident Alien	-.112	.067	.558	-.31	.09
	Other	.053	.058	.940	-.11	.22
African-American	White	-.046	.029	.596	-.13	.04
	Asian	-.226*	.054	.001	-.38	-.07
	Hispanic	-.147	.076	.390	-.37	.08
	Non-Resident Alien	-.158	.070	.227	-.36	.05
	Other	.007	.061	1.000	-.17	.18
Asian	White	.180*	.050	.007	.03	.33
	African-American	.226*	.054	.001	.07	.38
	Hispanic	.079	.086	.939	-.17	.33
	Non-Resident Alien	.069	.081	.957	-.17	.30
	Other	.234*	.073	.022	.02	.45
Hispanic	White	.101	.073	.737	-.12	.32
	African-American	.147	.076	.390	-.08	.37
	Asian	-.079	.086	.939	-.33	.17
	Non-Resident Alien	-.011	.097	1.000	-.29	.27
	Other	.154	.091	.536	-.11	.42
Non-Resident Alien	White	.112	.067	.558	-.09	.31
	African-American	.158	.070	.227	-.05	.36
	Asian	-.069	.081	.957	-.30	.17
	Hispanic	.011	.097	1.000	-.27	.29
	Other	.165	.086	.395	-.08	.41
Other	White	-.053	.058	.940	-.22	.11
	African-American	-.007	.061	1.000	-.18	.17
	Asian	-.234*	.073	.022	-.45	-.02
	Hispanic	-.154	.091	.536	-.42	.11
	Non-Resident Alien	-.165	.086	.395	-.41	.08

*. The mean difference is significant at the 0.05 level.

Age * Multiple Comparisons
Returned
Games-Howell

(I) Age	(J) Age	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
17 years or younger	18 years old	.011	.048	1.000	-.13	.15
	19 years old	.054	.061	.952	-.12	.23
	20 years old	.131	.099	.774	-.16	.42
	21 years old	.076	.170	.997	-.51	.66
	22 years or older	.186	.084	.245	-.06	.43
18 years old	17 years or younger	-.011	.048	1.000	-.15	.13
	19 years old	.043	.043	.915	-.08	.17
	20 years old	.120	.089	.757	-.15	.39
	21 years old	.065	.164	.998	-.51	.65
	22 years or older	.175	.072	.162	-.04	.39
19 years old	17 years or younger	-.054	.061	.952	-.23	.12
	18 years old	-.043	.043	.915	-.17	.08
	20 years old	.077	.097	.967	-.21	.37
	21 years old	.022	.168	1.000	-.56	.61
	22 years or older	.132	.082	.587	-.11	.37
20 years old	17 years or younger	-.131	.099	.774	-.42	.16
	18 years old	-.120	.089	.757	-.39	.15
	19 years old	-.077	.097	.967	-.37	.21
	21 years old	-.055	.186	1.000	-.66	.55
	22 years or older	.055	.113	.996	-.28	.39
21 years old	17 years or younger	-.076	.170	.997	-.66	.51
	18 years old	-.065	.164	.998	-.65	.51
	19 years old	-.022	.168	1.000	-.61	.56
	20 years old	.055	.186	1.000	-.55	.66
	22 years or older	.110	.178	.988	-.48	.70
22 years or older	17 years or younger	-.186	.084	.245	-.43	.06
	18 years old	-.175	.072	.162	-.39	.04
	19 years old	-.132	.082	.587	-.37	.11
	20 years old	-.055	.113	.996	-.39	.28
	21 years old	-.110	.178	.988	-.70	.48

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
	Rest of United States	-.049	.051	.929	-.20	.10
	International	-.121	.067	.478	-.32	.08
Rest of Alabama	Mobile or Baldwin County	.012	.029	.998	-.07	.09
	Mississippi Service Area	.054	.046	.854	-.08	.19
	Florida Service Area	-.038	.058	.986	-.21	.13
	Rest of United States	-.037	.054	.984	-.19	.12
	International	-.108	.069	.627	-.31	.10
Mississippi Service Area	Mobile or Baldwin County	-.042	.043	.927	-.16	.08
	Rest of Alabama	-.054	.046	.854	-.19	.08
	Florida Service Area	-.092	.066	.734	-.28	.10
	Rest of United States	-.090	.063	.699	-.27	.09
	International	-.162	.076	.286	-.39	.06
Florida Service Area	Mobile or Baldwin County	.051	.055	.943	-.11	.21
	Rest of Alabama	.038	.058	.986	-.13	.21
	Mississippi Service Area	.092	.066	.734	-.10	.28
	Rest of United States	.002	.072	1.000	-.21	.21
	International	-.070	.084	.960	-.31	.17
Rest of United States	Mobile or Baldwin County	.049	.051	.929	-.10	.20
	Rest of Alabama	.037	.054	.984	-.12	.19
	Mississippi Service Area	.090	.063	.699	-.09	.27
	Florida Service Area	-.002	.072	1.000	-.21	.21
	International	-.072	.081	.949	-.31	.16
International	Mobile or Baldwin County	.121	.067	.478	-.08	.32
	Rest of Alabama	.108	.069	.627	-.10	.31
	Mississippi Service Area	.162	.076	.286	-.06	.39
	Florida Service Area	.070	.084	.960	-.17	.31
	Rest of United States	.072	.081	.949	-.16	.31

High School GPA * Multiple Comparisons
Returned
Games-Howell

(I) High School GPA	(J) High School GPA	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval Lower Bound	95% Confidence Interval Upper Bound
2.24 or lower	2.25-2.5	-.071	.095	.944	-.34	.19
	2.51-3.0	-.123	.079	.531	-.34	.10
	3.01-3.5	-.223*	.077	.043	-.44	.00
	3.51-4.0	-.386*	.075	.000	-.60	-.17
2.25-2.5	2.24 or lower	.071	.095	.944	-.19	.34
	2.51-3.0	-.051	.066	.937	-.23	.13
	3.01-3.5	-.152	.064	.137	-.33	.03
	3.51-4.0	-.315*	.062	.000	-.49	-.14
2.51-3.0	2.24 or lower	.123	.079	.531	-.10	.34
	2.25-2.5	.051	.066	.937	-.13	.23
	3.01-3.5	-.100*	.036	.042	-.20	.00
	3.51-4.0	-.263*	.032	.000	-.35	-.18
3.01-3.5	2.24 or lower	.223*	.077	.043	.00	.44
	2.25-2.5	.152	.064	.137	-.03	.33
	2.51-3.0	.100*	.036	.042	.00	.20
	3.51-4.0	-.163*	.028	.000	-.24	-.09
3.51-4.0	2.24 or lower	.386*	.075	.000	.17	.60
	2.25-2.5	.315*	.062	.000	.14	.49
	2.51-3.0	.263*	.032	.000	.18	.35
	3.01-3.5	.163*	.028	.000	.09	.24

*. The mean difference is significant at the 0.05 level.

ACT Composite * Multiple Comparisons

Returned

Games-Howell

(I) ACT	(J) ACT	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval Lower Bound	95% Confidence Interval Upper Bound
18 or lower	19-20	-.077	.042	.458	-.20	.04
	21-23	-.110	.041	.075	-.23	.01
	24-26	-.137*	.041	.013	-.26	-.02
	27-29	-.197*	.048	.001	-.34	-.06
	30 or higher	-.301*	.055	.000	-.46	-.14
19-20	18 or lower	.077	.042	.458	-.04	.20
	21-23	-.033	.036	.941	-.14	.07
	24-26	-.060	.037	.581	-.17	.05
	27-29	-.121	.044	.074	-.25	.01
	30 or higher	-.224*	.052	.000	-.37	-.07
21-23	18 or lower	.110	.041	.075	-.01	.23
	19-20	.033	.036	.941	-.07	.14
	24-26	-.027	.035	.972	-.13	.07
	27-29	-.088	.043	.316	-.21	.03
	30 or higher	-.191*	.050	.003	-.34	-.04
24-26	18 or lower	.137*	.041	.013	.02	.26
	19-20	.060	.037	.581	-.05	.17
	21-23	.027	.035	.972	-.07	.13
	27-29	-.061	.043	.731	-.19	.06
	30 or higher	-.164*	.051	.021	-.31	-.02
27-29	18 or lower	.197*	.048	.001	.06	.34
	19-20	.121	.044	.074	-.01	.25
	21-23	.088	.043	.316	-.03	.21
	24-26	.061	.043	.731	-.06	.19
	30 or higher	-.104	.057	.451	-.27	.06
30 or higher	18 or lower	.301*	.055	.000	.14	.46
	19-20	.224*	.052	.000	.07	.37
	21-23	.191*	.050	.003	.04	.34
	24-26	.164*	.051	.021	.02	.31
	27-29	.104	.057	.451	-.06	.27

*. The mean difference is significant at the 0.05 level.

College * Multiple Comparisons
Returned
Games-Howell

(I) College	(J) College	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval Lower Bound	Upper Bound
AS	AH	-.062	.033	.493	-.16	.04
	BU	-.053	.044	.895	-.19	.08
	CS	.124	.074	.633	-.10	.35
	ED	-.019	.054	1.000	-.18	.14
	EG	.020	.038	.999	-.09	.13
	NU	-.003	.036	1.000	-.11	.10
AH	AS	.062	.033	.493	-.04	.16
	BU	.009	.048	1.000	-.13	.15
	CS	.185	.076	.202	-.05	.42
	ED	.043	.057	.989	-.13	.21
	EG	.082	.043	.478	-.05	.21
	NU	.058	.041	.787	-.06	.18
BU	AS	.053	.044	.895	-.08	.19
	AH	-.009	.048	1.000	-.15	.13
	CS	.177	.082	.328	-.07	.42
	ED	.034	.064	.998	-.16	.23
	EG	.073	.052	.802	-.08	.23
	NU	.050	.051	.957	-.10	.20
CS	AS	-.124	.074	.633	-.35	.10
	AH	-.185	.076	.202	-.42	.05
	BU	-.177	.082	.328	-.42	.07
	ED	-.143	.087	.660	-.41	.12
	EG	-.104	.079	.842	-.34	.14
	NU	-.127	.078	.662	-.36	.11
ED	AS	.019	.054	1.000	-.14	.18
	AH	-.043	.057	.989	-.21	.13
	BU	-.034	.064	.998	-.23	.16
	CS	.143	.087	.660	-.12	.41
	EG	.039	.061	.995	-.14	.22
	NU	.016	.059	1.000	-.16	.19
EG	AS	-.020	.038	.999	-.13	.09
	AH	-.082	.043	.478	-.21	.05
	BU	-.073	.052	.802	-.23	.08
	CS	.104	.079	.842	-.14	.34
	ED	-.039	.061	.995	-.22	.14
	NU	-.023	.046	.999	-.16	.11
NU	AS	.003	.036	1.000	-.10	.11
	AH	-.058	.041	.787	-.18	.06
	BU	-.050	.051	.957	-.20	.10
	CS	.127	.078	.662	-.11	.36
	ED	-.016	.059	1.000	-.19	.16
	EG	.023	.046	.999	-.11	.16

Orientation * Multiple Comparisons
Returned
Games-Howell

(I) Orientation	(J) Orientation	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval Lower Bound	Upper Bound
August/Transfer	May Orientation	-.229*	.068	.018	-.43	-.02
	Freshman Session 1	-.306*	.043	.000	-.43	-.18
	Freshman Session 2	-.260*	.044	.000	-.39	-.13
	Freshman Session 3	-.276*	.044	.000	-.41	-.15
	Freshman Session 4	-.194*	.045	.000	-.33	-.06
	Freshman Session 5	-.137*	.044	.032	-.27	-.01
May Orientation	August/Transfer	.229*	.068	.018	.02	.43
	Freshman Session 1	-.077	.065	.897	-.27	.12
	Freshman Session 2	-.031	.065	.999	-.23	.17
	Freshman Session 3	-.047	.065	.991	-.24	.15
	Freshman Session 4	.034	.066	.998	-.16	.23
	Freshman Session 5	.092	.065	.795	-.10	.29
Freshman Session 1	August/Transfer	.306*	.043	.000	.18	.43
	May Orientation	.077	.065	.897	-.12	.27
	Freshman Session 2	.046	.038	.891	-.07	.16
	Freshman Session 3	.030	.038	.987	-.08	.14
	Freshman Session 4	.111	.039	.069	.00	.23
	Freshman Session 5	.169*	.038	.000	.06	.28
Freshman Session 2	August/Transfer	.260*	.044	.000	.13	.39
	May Orientation	.031	.065	.999	-.17	.23
	Freshman Session 1	-.046	.038	.891	-.16	.07
	Freshman Session 3	-.016	.039	1.000	-.13	.10
	Freshman Session 4	.065	.040	.673	-.05	.18
	Freshman Session 5	.123*	.039	.031	.01	.24
Freshman Session 3	August/Transfer	.276*	.044	.000	.15	.41
	May Orientation	.047	.065	.991	-.15	.24
	Freshman Session 1	-.030	.038	.987	-.14	.08
	Freshman Session 2	.016	.039	1.000	-.10	.13
	Freshman Session 4	.081	.040	.406	-.04	.20
	Freshman Session 5	.139*	.039	.008	.02	.26
Freshman Session 4	August/Transfer	.194*	.045	.000	.06	.33
	May Orientation	-.034	.066	.998	-.23	.16
	Freshman Session 1	-.111	.039	.069	-.23	.00
	Freshman Session 2	-.065	.040	.673	-.18	.05
	Freshman Session 3	-.081	.040	.406	-.20	.04
	Freshman Session 5	.058	.040	.783	-.06	.18
Freshman Session 5	August/Transfer	.137*	.044	.032	.01	.27
	May Orientation	-.092	.065	.795	-.29	.10
	Freshman Session 1	-.169*	.038	.000	-.28	-.06
	Freshman Session 2	-.123*	.039	.031	-.24	-.01
	Freshman Session 3	-.139*	.039	.008	-.26	-.02
	Freshman Session 4	-.058	.040	.783	-.18	.06

*. The mean difference is significant at the 0.05 level.

USA Hours Earned * Multiple Comparisons

Returned

Games-Howell

(I) USA Hours Earned	(J) USA Hours Earned	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval Lower Bound	Upper Bound
0-6 hours	6.5-12 hours	-.147*	.041	.005	-.27	-.03
	12.5-18 hours	-.283*	.044	.000	-.41	-.16
	18.5-24 hours	-.638*	.035	.000	-.74	-.54
	24.5-30 hours	-.776*	.027	.000	-.85	-.70
	30.5 or more hours	-.836*	.024	.000	-.91	-.77
6.5-12 hours	0-6 hours	.147*	.041	.005	.03	.27
	12.5-18 hours	-.136	.052	.095	-.28	.01
	18.5-24 hours	-.490*	.044	.000	-.62	-.36
	24.5-30 hours	-.628*	.039	.000	-.74	-.52
	30.5 or more hours	-.689*	.037	.000	-.79	-.58
12.5-18 hours	0-6 hours	.283*	.044	.000	.16	.41
	6.5-12 hours	.136	.052	.095	-.01	.28
	18.5-24 hours	-.354*	.047	.000	-.49	-.22
	24.5-30 hours	-.492*	.042	.000	-.61	-.37
	30.5 or more hours	-.553*	.040	.000	-.67	-.44
18.5-24 hours	0-6 hours	.638*	.035	.000	.54	.74
	6.5-12 hours	.490*	.044	.000	.36	.62
	12.5-18 hours	.354*	.047	.000	.22	.49
	24.5-30 hours	-.138*	.032	.000	-.23	-.05
	30.5 or more hours	-.198*	.029	.000	-.28	-.11
24.5-30 hours	0-6 hours	.776*	.027	.000	.70	.85
	6.5-12 hours	.628*	.039	.000	.52	.74
	12.5-18 hours	.492*	.042	.000	.37	.61
	18.5-24 hours	.138*	.032	.000	.05	.23
	30.5 or more hours	-.060*	.020	.036	-.12	.00
30.5 or more hours	0-6 hours	.836*	.024	.000	.77	.91
	6.5-12 hours	.689*	.037	.000	.58	.79
	12.5-18 hours	.553*	.040	.000	.44	.67
	18.5-24 hours	.198*	.029	.000	.11	.28
	24.5-30 hours	.060*	.020	.036	.00	.12

*. The mean difference is significant at the 0.05 level.

USA GPA * Multiple Comparisons

Returned

Games-Howell

(I) USA GPA	(J) USA GPA	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval Lower Bound	95% Confidence Interval Upper Bound
2.0 or lower	2.01-2.5	-.419*	.035	.000	-.51	-.32
	2.51-3.0	-.467*	.031	.000	-.55	-.38
	3.01-3.5	-.566*	.027	.000	-.64	-.49
	3.51-4.0	-.556*	.028	.000	-.63	-.48
2.01-2.5	2.0 or lower	.419*	.035	.000	.32	.51
	2.51-3.0	-.048	.037	.676	-.15	.05
	3.01-3.5	-.147*	.033	.000	-.24	-.06
	3.51-4.0	-.138*	.034	.001	-.23	-.04
2.51-3.0	2.0 or lower	.467*	.031	.000	.38	.55
	2.01-2.5	.048	.037	.676	-.05	.15
	3.01-3.5	-.099*	.030	.008	-.18	-.02
	3.51-4.0	-.089*	.031	.031	-.17	-.01
3.01-3.5	2.0 or lower	.566*	.027	.000	.49	.64
	2.01-2.5	.147*	.033	.000	.06	.24
	2.51-3.0	.099*	.030	.008	.02	.18
	3.51-4.0	.009	.027	.997	-.06	.08
3.51-4.0	2.0 or lower	.556*	.028	.000	.48	.63
	2.01-2.5	.138*	.034	.001	.04	.23
	2.51-3.0	.089*	.031	.031	.01	.17
	3.01-3.5	-.009	.027	.997	-.08	.06

*. The mean difference is significant at the 0.05 level.

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
East Tennessee State University	Johnson City	TN
Florida Atlantic University	Boca Raton	FL
Florida International University	Miami	FL
Georgia State University	Atlanta	GA
Lamar University	Beaumont	TX
Louisiana Tech University	Ruston	LA
Old Dominion University	Norfolk	VA
Texas A & M University-Corpus Christi	Corpus Christi	TX
Texas State University-San Marcos	San Marcos	TX
University of Alabama	Tuscaloosa	AL
University of Alabama at Birmingham	Birmingham	AL
University of Alabama in Huntsville	Huntsville	AL
University of Central Florida	Orlando	FL
University of Houston	Houston	TX
University of Memphis	Memphis	TN
University of Missouri-Kansas City	Kansas City	MO
University of New Orleans	New Orleans	LA
University of North Florida	Jacksonville	FL
University of North Texas	Denton	TX
University of South Florida-Main Campus	Tampa	FL
University of Texas at Arlington	Arlington	TX
University of Texas at Dallas	Richardson	TX
University of Texas at El Paso	El Paso	TX
University of Texas of the Permian Basin	Odessa	TX
University of West Alabama	Livingston	AL
University of West Florida	Pensacola	FL
Virginia Commonwealth University	Richmond	VA
Wichita State University	Wichita	KS