2007 Freshman Cohort Retention Report

Overview

The following report summarizes retention of the 1,418 first-time full-time baccalaureate degree seeking freshman students in the University of South Alabama (USA) Fall 2007 freshman student cohort. Retention in the context of this report is defined as whether or not the freshman student persisted and enrolled one year later in the Fall 2008 semester. The input-environment-outcome (IEO) model developed by Alexander W. Astin[1] over several years of research in higher education was used as a conceptual framework to guide this analysis. The primary question addressed by analyzing student input variables is, "What do you know about the student before he/she came to your institution?" The primary question addressed by analyzing the environment variables is, "What do you know about the environment and/or support provided to the student by the institution, government (e.g., financial aid), or private parties (e.g., scholarships)?" Outcomes include cognitive or affective variables which answer the question, "What effect did the environment have on the student?"

The variables included in this analysis were selected based on input from administrators and faculty on campus. For this study, input variables were: location of student residency prior to enrolling at USA, gender, ethnicity, age, high school GPA, and ACT score. Environmental variables were: whether the student received a freshman scholarship[2], whether the student received third party scholarship[3], whether the student received financial aid, orientation session attended, whether the student attended freshman seminar, whether the student lived on or off campus, and which college housed

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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] Bay Area, Honors, Mitchell, Presidential, or Starnes merit based scholarships.

[3] Military/ROTC, vocational rehab, employ[illegible]

the major the student selected at initial enrollment. Endogenous outcomes of interest were total hours completed through the Summer of 2008 and the USA GPA the student attained through the Summer of 2008. However, the primary outcome of interest for this study was whether or not the student persisted and enrolled one year later in the Fall 2008 semester. The research question addressed was, "Which student characteristics (inputs) and environmental characteristics (support from USA and others) can be used to best predict the persistence of USA freshman students?"

Cross tabular results for each variable and

at rates lower than the cohort retention rate (67%). Females (69%) persisted at a higher rate than males (65%) and at a slightly higher rate than the cohort retention rate (67%). African-Americans (54%) and Non-Resident Aliens (65%) persisted at rates lower than the cohort retention rate (67%). Finally, as age increased, high school GPA declined, or ACT score declined, retention decreased. Students who were 19 or older, or had a high school GPA less than 3.01, or had an ACT score of 20 or below, persisted at rates lower than the cohort retention rate (67%).

Table 1: Comparisons of Input Variables to Fall 2007 Cohort Retention Rate (High to Low)

Variable	Retention Rate >= 67%	Count	Retention Rate < 67%	Count
Region				

Table 2: Comparisons of Environmental Variables to Fall 2007 Cohort Retention Rate (cont')

Variable	Retention Rate >= 67%	Count

Students with a USA GPA of 2.01 or above through Summer 2008 persisted at a higher rate (at least 73%) compared to students with a GPA of 2.0 or below (39%) and compared to the cohort rate (67%).

hours and USA GPA through Summer 2008 to see what happened when these outcomes

Table 4: Model 1 Classification Table[a]

		Predicted	
		Returned	
Observed		Yes	No

Table 5: Model 1 Final Variables in the Equation

		B	S.E.	Exp(B)	95.0% C.I.for Exp(B)	
					Lower	Upper
Step 1[a]	HSGPA 2.5 or below	1.319	.231	3.740	2.376	5.886
	HSGPA 2.51-3.0	1.294	.176	3.646	2.584	5.146
	HSGPA 3.01-3.5	.651	.172	1.918	1.369	2.686
	Constant	-1.508	.124	.221		
Step 2[b]	Other Ethnicity	-.343	.259	.710	.427	1.178
	African-American	.462	.168	1.587	1.141	2.206
	HSGPA 2.5 or below	1.191	.236	3.290	2.070	5.229
	HSGPA 2.51-3.0	1.232	.178	3.426	2.419	4.853
	HSGPA 3.01-3.5	.615	.173	1.849	1.318	2.595
	Constant	-1.530	.129	.217		

a. Variable(s) entered on step 1: HSGPA.
b. Variable(s) entered on step 2: Ethnicity.
c. Comparison group for HSGPA=3.51-4.0 and Ethnicity=White.

In terms of ethnicity, the odds of an African-American (1.59) student not returning were higher than for White students while the odds of students of another ethnicity (0.71) showed that they were more likely to return than White students. For African-American students, the confidence interval (95%) indicated that the odds of an African-American not returning are indeed greater than White students since the confidence interval did not encompass an odds value lower than one. However, with students of another ethnicity, the confidence interval was between 0.43-1.18 so odds for students of another ethnicity not returning should be interpreted more cautiously since the confidence interval spans above and below an odds value of one.

The second model included the input variables 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=yes, whether the student received a third party scholarship=yes, whether the student received financial aid=yes, whether the student attended freshman seminar=yes, orientation session

and ethnicity were significant in the final model (step 3). However, orientation session attended was also significant in the second model. Once again, the final version (step 3) of the second model showed that the odds (Exp(B)) of a student not returning were higher for students with the lowest high school GPAs (2.5 or below=2.48, 2.51-3.0=2.85, and 3.01-3.5=1.64) than for students with a high school GPA between 3.51-4.0. Additionally, all confidence intervals (95%) indicated that the odds of a student with a lower high school GPA not returning are greater than students with a high school GPA of 3.51-4.0 since the confidence intervals do not encompass an odds value lower than one.

Table 7: Model 2 Final Variables in the Equation

					95.0% C.I.for Exp(B)	
		B	S.E.	Exp(B)	Lower	Upper
Step 1[a]	HSGPA 2.5 or below	1.324	.235	3.760	2.372	5.959
	HSGPA 2.51-3.0	1.296	.177	3.655	2.585	5.169
	HSGPA 3.01-3.5	.667	.173	1.948	1.388	2.733
	Constant	-1.521	.125	.218		
Step 2[b]	HSGPA 2.5 or below	.993	.247	2.699	1.663	4.381
	HSGPA 2.51-3.0	1.084	.186	2.957	2.055	4.255
	HSGPA 3.01-3.5	.520	.178	1.682	1.188	2.383
	May Session	-.780	.487	.458	.177	1.189
	Summer 1 Session	-1.282	.268	.278	.164	.470
	Summer 2 Session	-.704	.261	.495	.297	.824
	Summer 3 Session	-.908	.250	.403	.247	.659
	Summer 4 Session	-.691	.244	.501	.311	.809
	Summer 5 Session	-.331	.221	.719	.466	1.107
	Constant	-.752	.220	.472		

Table 7: Model 2 Final Variables in the Equation (cont')

	B	S.E.

other orientation sessions had odds values for returning lower than the odds of a student who attended the August session of orientation for not returning (May=.44, Summer 1=.28, Summer 2=.50, Summer 3=.40, Summer 4=.49, Summer 5=.69). Additionally, only the May session of orientation (0.17-1.15) and Summer session five (0.45-1.07) had a confidence interval with an odds ratios that captured an odds value greater than one. Therefore, it was clear from looking at the confidence intervals that the odds of students attending the August session of orientation not returning are greater than the odds for students attending Summer sessions one, two, three, and four of returning and likely greater for not returning than the odds of students attending the May or Summer session five orientation.

Model 3: Logistic Regression with Endogenous 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 endogenous outcomes of institutional number of hours earned through the Summer of 2008 and USA GPA the student attained through the Summer of 2008. The first and second models can be used based on data known before or at least early on after the student comes to campus. This third model can only be used after Summer 2008 has ended. A model with input, environmental, and endogenous outcome variables was also tested but the two outcome variables suppressed the results of the other predictors in the model (high school GPA flipped to show lower GPA were more likely to return which is clearly not the case). Additionally, a simpler more parsimonious model is desirable and the classification rates for returning (same) and non returning students (3.9% lower) were almost identical.

The correct classification rate for this third model (see Table 8: Model 3 Classification Table) once again decreased to 90.0% for returning students. However,

Table 8: Model 3 Classification Table[a]

Observed			Predicted		
			Returned		
			Yes	No	Percentage Correct
Step 1	Returned	Yes	854	95	90.0
		No	166	287	63.4
		Overall Percentage			81.4

a. The cut value is .500

In the third model (see Table 9: Model 3 Final Variables in the Equation), only

Additionally, this third model was tested with only USA GPA used as a predictor (earned hours was excluded) of whether or not students would return (see Table 10: Model 3 Final Variables in the Equation). Results showed that the odds of a student not returning were greater for students with lower USA GPAs (2.0 or below=14.22, 2.01-2.5=3.29, 2.51-3.0=2.32, and 3.01-3.5=1.30). Only a USA GPA of 3.01-3.5 captured an odds value less than one (0.72-2.33) indicating that there were distinct differences with retention based on USA GPA after Summer 2008 at all other GPA levels.

Table 10: Model 3 Variables in the Equation

					95.0% C.I.for EXP(B)	
		B	S.E.	Exp(B)	Lower	Upper
Step 1	USA_GPA(1)	2.655	.238	14.222	8.922	22.671
	USA_GPA(2)	1.191	.271	3.290	1.936	5.593
	USA_GPA(3)	.840	.273	2.315	1.355	3.957
	USA_GPA(4)	.260	.298	1.297	.723	2.326
	Constant	-2.226	.219	.108		

Peer Comparisons

Finally, the Integrated Postsecondary Education Data System (IPEDS) was used to compare USA to 25 peer institutions to gain a better idea of graduation rates and retention rates (see National Ce

ACT, and Math ACT scores of first-time degree/certificate seeking undergraduate students were almost identical at the 25th and 75th percentiles for undergraduate students compared to the peer group median. However, retention rates and six year graduation rates were lower in all categories for USA compared to the peer group median, particularly for Black, non-Hispanic students (28% for USA compared to 43 % for peers).

However, Kuh found that far too few students are exposed to the proven practices. First-generation college students and other traditionally underrepresented students in higher education are least likely to participate in these techniques, even though research shows that first-generation college students and other traditionally underrepresented students benefit even more than their peers. The primary reasons for these differences included cost and obtaining necessary faculty buy-in.

Minority Students

In terms of ethnicity, compared to White students, the retention rates and odds of students not returning who are of other ethnicity (not including international students) are similar to or lower than the odds of White students for not returning. However, the same is not true for African-American students. Compared to students in the Fall 2006 freshman cohort, the retention rate for African-American students in the Fall 2007 cohort dropped from 76% to 54%. With African-American students (258) representing 18.2% of the overall Fall 2007 cohort of 1,418 students, this large drop in retention of African-American students in the Fall 2007 cohort compared to the Fall 2006 cohort is an important issue.

two institutions have made to raise their African-American graduation rates to a point where both institutions actually graduate a slightly larger share of African American students compared to White

undertaken later this year to examine if returning students transferred to another

session five than any other orientation session. Identifying ways to meet the class scheduling needs of students who attend later orientation sessions should also be a topic of discussion because many classes are filled by the end of the Summer. This makes creating a class schedule for students attending the last orientation sessions more difficult.

Freshman Seminar

In a previous study by Institutional Research, Planning, and Assessment of this Fall 2007 cohort, the retention rate for the 1,376 students (69%) who took Freshman Seminar was much higher than the retention rate of the students who did not take Freshman Seminar (48%) and also higher than the retention rate of the Fall 2007 freshman cohort (67%). When comparing students who took Freshman Seminar in this cohort to students who did not take Freshman Seminar, the mean difference was statistically significant at the .000 p level. In short, taking Freshman Seminar positively impacted retention for this freshman cohort.

Similar to findings at USA, first-year programs including Freshman Seminar, learning communities, and the integration of academic advising with first-year programs has been found to have the greatest contribution to retention of 1,061 colleges surveyed by ACT in 2003[8]. Noel-Levitz found similar results in 2007 in a survey of 193 four-year institutions with the top three retention strategies identified as 1) Freshman Seminar, 2) intrusive advising, and 3) early alert systems[9]. However, according to John N. Gardner, who is nationally recognized for his efforts to develop and promote Freshman Seminar, retention is not the only reason and/or benefit realized from Freshman Seminar programs nor should it be. Rather it should have a more substantive intellectual rationale[10].

Freshman Seminar is used by several institutions to assist students with

usage[11]. Other benefits of Freshman Seminar include: 1) integration of academic and social elements found inside and outside the classroom, 2) increasing student interaction with each other, upper-level students, and with faculty/staff, 3) increasing student involvement, commitment, and time on campus, 4) linking the curriculum to the co-curriculum (out of class experiences), 5) increasing academic expectations and levels of academic engagement, and 6) assisting students who have insufficient academic preparation for college[12]. Freshman Seminar has also been linked to higher cumulative GPAs and earned credit hours with students of similar characteristics[13].

George Kuh, over his extensive career researching student engagement and success in directing the National Survey of Student Engagement (NSSE) research program, has also seen the positive benefits of a solid Freshman Seminar program on hundreds of campuses. When asked the question on his visits to these campuses, "What is the one thing we should do to increase student engagement and success on our campus?" Kuh states[14] that there is growing evidence that when done well, a handful of selected programs and activities appear to engage participants at levels that boost their performance across a variety of educational activities and desired outcomes such as persistence and he specifically listed Freshman Seminar as one of the more promising "high impact" practices.

Gardner[15] offered a number of suggestions of how to increase Freshman Seminar effectiveness. He said training matters with course effectiveness only as good as training support. Recurring hard monies for the course is vital. Stand alone Freshman Seminars are not as effective because synergies come when combining the course with service learning, living learning communities, learning communities, etc. Peer leaders strengthen

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[11] Barefoot, B. O. (2008). Gathering evidence of first-year seminar effectiveness. Wadsworth E-Seminar Series, February 25, 2008.

[12] Barefoot, B. O. (2000). The first-year experience: Are we making it any better? About Campus, January/February.

[13] Sidle, M.W. & McReynolds, J. (1999). The freshman year experience: Student retention and student success. NASPA Journal, 36(4), Summer.

[14] National Survey of Student Engagement Experiences That Matter: Enhancing Student Learning and Success Annual Report 2007.

[15] Gardner, J. N. (2007). Strategies and good counsel for administrators of first-year seminars: Effective leadership for new student success and retention. Cengage Publishing/Wadsworth Seminar, October 3, 2007.

the course since the greatest influence on students is other students. More credit is almost always better because it makes it more like a “real” college course.

Gardner stated that reporting lines and home units matter as well. Reporting to

accounting and statistics courses were linked for sophomore students who returned from the Fall 2007 cohort.

Another improvement that may help increase retention of students living on campus would be purchasing roommate matching software which allows freshmen to identify roommates in advance with whom they were more likely to become friends and enjoy sharing space on campus. Funding for more peer advisors living in University Housing would provide an opportunity for freshmen to connect with upperclassmen who can help freshmen living on campus with adjusting to life at college and at USA. Resources to expand educational programming would also enhance residential life by providing more opportunities for students to learn and to grow both inside and outside the classroom. Living learning communities linking academic classes with students living in certain housing units may also prove beneficial.

Scholarships/Financial Aid

With scholarships positively impacting student retention, the disparity in the number of scholarships for minority students should be addressed. In a previous study of freshman scholarship retention by Institutional Research and Planning of the Fall 2006 and Fall 2007 cohorts, White students received 65% of all scholarships in 2006 and 66% of all scholarships in 2007. The scholarships analyzed in the report (Bay Area, Honors,

students who have strong leadership and/or service experiences would also contribute significantly to the campus and to the community. Students with leadership and service oriented experiences would likely become involved and engaged in campus activities helping them make critical connections with peers, faculty, and/or staff on campus. These connections would encourage leadership or service scholarship recipients to persist and graduate from the institution. In addition to seeking private funding to endow new scholarships, new scholarships could come from other sources such as student parking tickets or other auxiliary sources similar to what is done at other universities.

Service Learning

Expanding service learning opportunities on campus is another option to consider and would nicely complement the addition of leadership and service related scholarships. Incorporating service into academic learning is a terrific way to allow the student to interact with faculty and peers and to grow in many ways by participating in service projects connected with classroom learning experiences in the local community or other places around the world. A number of institutions have realized the positive public relations and benefits to students and the community.

Advising

The retention rates of students varied ba

ensure that at-risk students receive the additional advisement they need to assist them during their first year in college.

Local Students

With students from the local area of Mobile or Baldwin County and also from the Mississippi service area having lower retention rates than students from the rest of Alabama, the Florida service area, and the rest of the United States, it appears there is an opportunity to focus on retaining local students. With scholarships positively impacting retention, perhaps extending the length of the Bay Area merit based scholarship from the current length of one year to a greater period of time as long as the student meets certain GPA requirements would increase student retention for local area students. Additionally, providing some other form of scholarship to students attending high schools from the local area may be an option to consider.

Older Students

It is clear that students who are older, particularly 20 or older, are less likely to return than younger students. Older students are more likely to be working full-time and attending college part-time. These students have different needs than freshman students coming to the institution straight out of high school. Scheduling of evening classes and the provision of student support services for older first-time freshman students should be another focus of the institution to encourage them to persist.

Expand Office of Student Success/Retention

Due to the lack of available professional staff support, the Office of Student Academic Success and Retention focuses to a large extent on assisting under-prepared and at-risk students, especially conditionally admitted freshmen. With 4,109 new students (freshman and transfer students) enrolling at USA in Fall 2008, adding a professional staff member to this office would allow more emphasis specifically on students in the freshman class who are not conditionally admitted. Such emphasis would greatly increase the ability of this office to coordinate efforts across the entire campus to provide educational programming, intrusive advising, and other activities to assist regularly admitted freshmen adjust to their first year in college. This office could also work on easing the transition for the large number of transfer students who enroll at USA every year as well. In short, as the Education Sector report states, “Often, the distinguishing

factor for minority" and other student graduation rates and retention "isn't whether programs exist, but whether they're coordinated, supported, and well run."[16] An expanded Office of Student Academic Success and Retention would greatly assist with making sure programs are well run, coordinated, and supported.

Flat Tuition Rate

With number of credit hours earned serving as a significant predictor of freshman student retention, charging a flat tuition rate like the University of Auburn (flat rate for 10-15 hours) or University of Alabama (flat rate for 12-17 hours) should be considered by the institution. Charging a flat tuition rate for students would encourage students at all levels, not just freshmen, to take additional classes while also saving the student money and in the long term would shorten the student's time to degree. Perhaps conditionally admitted freshman may be better off focusing on taking a maximum of 14 hours. However, allowing other students the opportunity to take at least 15 (like Auburn) to 17 credits (like Alabama) for the same flat rate as 10 (Auburn) or 12 (Alabama) credits would seem to be very beneficial in helping students save money and also graduate in a timelier fashion.

Future Retention Research

This report is one of four retention related studies completed by Institutional Research, Planning and Assessment during the Fall 2008 semester. Previous retention studies conducted this semester examined Freshman Seminar retention, transfer student retention, and retention of freshman scholarship recipients. A future retention study will use National Student Clearinghouse data to explore the issue of "Where did USA freshman non returners go?" The Fall 2006 and Fall 2007 freshman cohorts will be used to determine how many non returning students transferred to another institution and the characteristics of these students who transferred out of USA.

[16] Schmidt, P. (2008). Improving black graduation rates is mainly a matter of will. Chronicle of Higher Education, April 21, 2008.

Summary of Recommendations to Consider
Learning Communities

assist students attending orientation sessions at different points in the Summer, not just at orientation but also once they arrive on campus to attend classes.

- Personalize orientation sessions for the group of students attending the orientation session, particularly the Summer session five and August orientation session.
- Include greater academic emphasis within student orientation by involving faculty more in the orientation at each college level.
- Provide more staffing and support from colleges for Summer session five which had 66 more students (280 total) than any other orientation session.
- Identify ways to meet the class scheduling needs of students who attend later orientation sessions because many classes are filled by the end of the Summer.

Freshman Seminar

- Increase involvement of peer leaders in Freshman Seminar to facilitate a more successful social transition into USA.
- Ensure that first generation and/or minority students are well represented among the peers selected for Freshman Seminar when hiring student peer leaders.
- Include and/or add more skill building activities and more of a career component in Freshman Seminar.
- Provide necessary training and support for instructors.
- Combine effort to increase effectiveness of Freshman Seminar with efforts to expand service learning, living learning communities, learning communities, etc. on campus to realize the synergies that come from doing so.
- Keep reporting line for Freshman Seminar with Academic Affairs to yield a higher probability of long term viability.

Housing

- Add a dining hall closer to University housing.
- Fund more peer advisors living in University Housing.

Scholarships/Financial Aid

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- Award needs based scholarships in addition to existing merit based scholarships.
- Provide University sponsored financial aid funds for at-risk students and/or new scholarships that target minority students.
- Create new scholarships that reward attributes such as leadership and service which are not solely based on academic performance
- Consider extending length of Bay Area scholarship beyond one year and/or add other scholarships targeted towards large local student population.
- Charge flat tuition rate like the University of Auburn (flat rate for 10-15 hours) or University of Alabama (flat rate for 12-17 hours).

IRPA/gem

25 Selected IPEDS Peer Institutions
Focus institution: University of South Alabama

Unitid	Institution Name	City	State
100858	Auburn University Main Campus	Auburn	AL
198464	East Carolina University	Greenville	NC
220075	East Tennessee State University	Johnson City	TN
433660	Florida Gulf Coast University	FortMyers	FL
139940	Georgia State University	Atlanta	GA
101480	Jacksonville State University	Jacksonville	AL
232423	James Madison University	Harrisonburg	VA
140164	Kennesaw State University	Kennesaw	GA
159647	Louisiana Tech University	Ruston	LA
237525	Marshall University	Huntington	WV
220978	Middle Tennessee State University	Murfreesboro	TN
232982	Old Dominion University	Norfolk	VA
100751	The University of Alabama	Tuscaloosa	AL
138354	The University of West Florida	Pensacola	FL
102368	Troy University	Troy	AL
100663	University of Alabama at Birmingham	Birmingham	AL
100706	University of Alabama in Huntsville	Huntsville	AL
106245	University of Arkansas at Little Rock	Little Rock	AR
157289	University of Louisville	Louisville	KY
159939	University of New Orleans	New Orleans	LA
199139	University of North Carolina at Charlotte	Charlotte	NC
199148	University of North Carolina at Greensboro	Greensboro	NC
176372	University of Southern Mississippi	Hattiesburg	MS
141264	Valdosta State University	Valdosta	GA
172644	Wayne State University	Detroit	MI