2013 Freshman Cohort Retention Report

## Executive Summary

This report summarizes the retention of 1,825 students in the University of South Alabama (USA) 2013 first-time full-time baccalaureate degree-seeking freshman cohort. The retention rate for the 2013 freshman cohort was $71 \%$.

Similar to earlier studies, results indicated that retention of students with a lower high school GPA and students with a lower ACT Composite score is a concern. Once again, students attending the earlier freshman summer orientation sessions were more likely to return than students attending the later orientation sessions. The importance of scholarships for students was clear. Freshmen who participated in a learning community or lived on campus were more likely to return to USA the following year. Results also showed students who received a JagAlert during the Fall 2013 semester in multiple courses for lack of attendance and/or poor academic performance and students who were placed on probation after the Fall 2013 semester ended were unlikely to return to USA one year later.

## Overview

The following report provides a detailed analysis about the retention of the 1,825 first-time full-time baccalaureate degree-seeking freshmen students in the University of South Alabama (USA) 2013 freshman cohort. Retention in the context of this report is defined as whether freshmen students returned and enrolled one year later in the Fall 2014 semester. Similar to reports written by Institutional Research about the 2007 through 2012 freshman cohorts, the input-environment-outcome (IEO) model developed by Alexander W. Astin ${ }^{1}$ was used as a conceptual framework to guide this analysis.

Cross tabular results for each variable and whether the student returned are reported. Comparisons for each subgroup are made to the overall retention rate of the cohort (71\%). Significant mean differences for the input, environmental, and outcome variables are also indicated.

Additionally, five logistic regression models were tested. The first model included the input ${ }^{2}$ variables. The second model included the input and the environmental ${ }^{3}$ variables. The third model included two outcome variables known after the end of the Fall 2013 semester ${ }^{4}$. The fourth model and fifth model tested a different outcome variable known after the end of the Summer 2014 semester ${ }^{5}$. The predictive power of each model for explaining whether the student would return ( $\mathrm{Yes} / \mathrm{No}$ ) is reported as well as which variables were significant in each of the five models.

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## Cross Tabular Results

Cross tabular results for each variable and whether the student returned are summarized in the following section. Comparisons are made for each subgroup of the variable to the retention rate ( $71 \%$ ) of the 1,825 freshmen in the cohort. These comparisons illustrate which subgroups of students returned at higher, similar, or lower rates than the overall cohort retention rate of $71 \%$. In addition, significant mean differences for the input, environmental, and both sets of outcome variables (after Fall 2013 and after Summer 2014) are reported.

## Input Variable Cross Tabular Results

For the input variables included in this analysis (see Table 1), female students (72\%) returned at a higher rate than male students (70\%). In terms of race/ethnicity, African-American students (69\%), and students included in the "Other" race/ethnicity subgroup ${ }^{6}$ ( $67 \%$ ) returned at a rate lower than the cohort retention rate (71\%). The mean difference between retention of Non-Resident Alien students compared to students in the Multiracial, White, and African-American race/ethnicity subgroups was statistically significant (see Appendix: ANOVA Tables).

Table 1: Comparison of Input Variables to 2013 Cohort Retention Rate

| Variable | Retention Rate >= 71\% | Count | Retention Rate < 71\% | Count |
| :---: | :---: | :---: | :---: | :---: |
| Gender |  |  |  |  |
|  | Female (72\%) | 1,027 | Male (70\%) | 798 |
| *Race/Ethnicity |  |  |  |  |
|  | *Non-Resident Alien (96\%) | 23 | African-American (69\%) | 459 |
|  | Asian (82\%) | 51 | Other (67\%) | 27 |
|  | Hispanic (74\%) | 54 |  |  |
|  | Multiracial (74\%) | 65 |  |  |
|  | White (71\%) | 1,146 |  |  |
| Age |  |  |  |  |
|  | 18 years old (72\%) | 1,531 | 19 years old (69\%) | 132 |
|  |  |  | 17 years old or younger (68\%) | 104 |
|  |  |  | 20 years or older (66\%) | 58 |
| *Region |  |  |  |  |
|  | *International (96\%) | 23 | Mississippi Service Area (70\%) | 165 |
|  | Mobile or Baldwin County (72\%) | 798 | Rest of United States (66\%) | 122 |
|  | Rest of Alabama (71\%) | 636 | Florida Service Area (64\%) | 81 |
| *High School GPA |  |  |  |  |
|  | *3.51-4.0 (81\%) | 835 | 3.01-3.5 (66\%) | 546 |
|  |  |  | 2.51-3.0 (59\%) | 333 |
|  |  |  | 2.5 or lower (44\%) | 66 |
| *ACT Composite Score |  |  |  |  |
|  | *30 or higher (82\%) | 116 | 18 or lower (67\%) | 208 |
|  | 27-29 (77\%) | 226 | 19-20 (65\%) | 329 |
|  | 24-26 (74\%) | 394 |  |  |
|  | 21-23 (71\%) | 420 |  |  |
| 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 20 or older (66\%) returned at a lower rate than younger students. Comparisons based on what region the student came from showed that only

[^1]international students (96\%) and students from the Mobile or Baldwin County area (72\%) returned at a rate higher than the overall cohort (71\%). The mean difference between retention of international students compared to students from all other regions was statistically significant (see Appendix: ANOVA Tables).

Finally, for the most part, as high school GPA or ACT Composite score decreased, retention also decreased. Students who had a high school GPA ranging between 3.01-3.5 or lower returned at a rate lower than the rate for the overall cohort (71\%). Similarly, students who had an ACT Composite score of 19-20 or lower returned at a rate lower than the cohort retention rate ( $71 \%$ ). 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 (see Appendix: ANOVA Tables). The mean difference between retention of students with an ACT Composite score of 30 or higher in comparison to students with an ACT Composite score of 19-20 or lower was also statistically significant (see Appendix: ANOVA Tables).

## Environmental Variable Cross Tabular Results

For the environmental variables included in this analysis, retention rates illustrated that receiving scholarships positively affected retention (see Table 2). Students receiving a USA freshman scholarship ( $78 \%$ ) or some other type of scholarship ${ }^{7}$ ( $82 \%$ ) returned at a rate higher than the cohort retention rate (71\%). Additionally, the mean difference between students who received a USA freshman scholarship compared to students who did not receive a USA freshman scholarship was statistically significant (see Appendix: Independent T-Test Tables). Similarly, the mean difference between students who received some other type of scholarship compared to students who did not receive this other type of scholarship was statistically significant (see Appendix: Independent T-Test Tables).

[^2]Table 2: Comparison of Environmental Variables to 2013 Cohort Retention Rate

| Variable | Retention Rate >= 71\% | Count | Retention Rate < 71\% | Count |
| :---: | :---: | :---: | :---: | :---: |
| *USA Freshman Scholarship |  |  |  |  |
|  | *Yes (78\%) | 960 | No (63\%) | 865 |
| *Other Scholarship |  |  |  |  |
|  | *Yes (82\%) | 235 | No (69\%) | 1,590 |
| *Pell Grant |  |  |  |  |
|  | No (73\%) | 1,062 | *Yes (68\%) | 763 |
| *Housing |  |  |  |  |
|  | *On campus (73\%) | 1,063 | Off campus (68\%) | 762 |
| *Learning Community |  |  |  |  |
|  | *Yes (74\%) | 839 | No (69\%) | 986 |
| Freshman Seminar |  |  |  |  |
|  | No (72\%) | 590 |  |  |
|  | Yes (71\%) | 1,235 |  |  |
| College ${ }^{8}$ |  |  |  |  |
|  | Business (78\%) | 138 | Arts \& Sciences (69\%) | 631 |
|  | Computing (76\%) | 71 |  |  |
|  | Education (72\%) | 93 |  |  |
|  | Nursing (72\%) | 254 |  |  |
|  | Allied Health (71\%) | 353 |  |  |
|  | Engineering (71\%) | 282 |  |  |
| *Orientation Session |  |  |  |  |
|  | May Session (83\%) | 40 | Summer Session 5 (65\%) | 217 |
|  | Summer Session 1 (79\%) | 312 | Summer Session 6 (61\%) | 175 |
|  | Summer Session 2 (75\%) | 307 | *August/Other Orientation (59\%) | 151 |
|  | Summer Session 3 (74\%) | 327 |  |  |
|  | Summer Session 4 (71\%) | 296 |  |  |

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.

On the other hand, students receiving a Pell Grant (68\%) returned at a lower rate than the overall cohort (71\%). The mean difference between students who received a Pell Grant compared to students who did not receive a Pell Grant was statistically significant (see Appendix: Independent T-Test Tables).

Students who lived on campus (73\%) or participated in a learning community (74\%) returned at a higher rate than the overall cohort ( $71 \%$ ). In both of these comparisons, the mean difference between retention of 1) students who lived on campus and students who did not live on campus and 2) students who participated in a learning community and students who did not participate in a learning community was statistically significant (see Appendix: Independent T-Test Tables).

A comparison of students who took freshman seminar (71\%) to students who did not take freshman seminar ( $72 \%$ ) showed almost no difference in retention. Retention comparisons based on the college housing the major the student initially selected showed Business (78\%), Computing (76\%), Education (72\%), and Nursing (72\%) students returned at a higher rate than the overall cohort (71\%). However, no college based comparison was statistically significant (see Appendix: ANOVA Tables).

Finally, in terms of the orientation session attended, the retention rate of students who attended the May Orientation session or one of the first three Freshman Summer orientation sessions was higher than the

[^3]retention rate of the overall cohort (71\%). Retention rates based on the orientation session attended ranged from a high of $83 \%$ for students who attended the May orientation session to a low of $59 \%$ for students who attended either the August, Adult, a Transfer, or an unknown ${ }^{9}$ orientation session (AATU). When using the AATU students as a comparison group, there was a significant mean difference between the AATU group in comparison to the May orientation session and the first three Freshman Summer orientation sessions (see Appendix: ANOVA Tables).

## Outcome Variable After Fall 2013 Cross Tabular Results

Outcome variables incorporated into this analysis included whether the student received a JagAlert during Fall 2013 and whether the student was placed on probation after Fall 2013 (see Table 3). Students who did not receive a JagAlert or who only received a JagAlert in one course during Fall 2013 returned at a higher rate (at least 75\%) than the overall cohort (71\%). The mean difference for students who did not receive a JagAlert during Fall 2013 compared to students who received a JagAlert during Fall 2013 in one or multiple courses was statistically significant (see Appendix: ANOVA Tables).

Table 3: Comparison of Outcome Variables After Fall 2013 to 2013 Cohort Retention Rate

| Variable | Retention Rate >= 71\% | Count | Retention Rate < 71\% | Count |
| :---: | :---: | :---: | :---: | :---: |
| *Number of Courses with JagAlert during Fall 2013 |  |  |  |  |
|  | *No JagAlert (83\%) | 787 | Multiple Course JagAlert (51\%) | 538 |
|  | 1 Course JagAlert (75\%) | 500 |  |  |
| *Probation Status after Fall 2013 |  |  |  |  |
|  | No (81\%) | 1,443 | *Yes (34\%) | 382 |

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.

Students who were not on probation after Fall 2013 returned at a much higher rate (81\%) compared to students who were placed on probation after the Fall 2013 semester ended (34\%). The mean difference between students who were not on probation compared to students who were placed on probation was statistically significant (see Appendix: Independent T-Test Tables).

## Outcome Variable After Summer 2014 Cross Tabular Results

Outcome variables incorporated into this analysis also included the number of hours earned after Summer 2014 at USA and the USA GPA after Summer 2014 (see Table 4). Unsurprisingly, as the number of USA hours earned increased the retention rate also increased. Similarly, students with a higher USA GPA were more likely to return than students with a lower USA GPA.

[^4]Table 4: Comparison of Outcome Variables After Summer 2014 to 2013 Cohort Retention Rate

| Variable | Retention Rate >= 71\% | Count | Retention Rate < 71\% | Count |
| :---: | :---: | :---: | :---: | :---: |
| *USA Hours Earned after Summer 2014 |  |  |  |  |
|  | *30.5 or more (96\%) | 635 | 12.5-18 (43\%) | 164 |
|  | 24.5-30 (87\%) | 466 | 6.5-12 (19\%) | 138 |
|  | 18.5-24 (72\%) | 235 | 0-6 (11\%) | 153 |
| *USA GPA after Summer 2014 |  |  |  |  |
|  | 3.51-4.0 (90\%) | 360 | *2.0 or lower (37\%) | 446 |
|  | 3.01-3.5 (87\%) | 396 |  |  |
|  | 2.51-3.0 (83\%) | 328 |  |  |
|  | 2.01-2.5 (72\%) | 261 |  |  |
| 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. |  |  |  |  |

Students who completed 18.5-24 or more hours at USA after Summer 2014 returned at a higher rate (at least 72\%) compared to students completing 12.5-18 or fewer hours (at most 43\%). 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 ranging between 2.01-2.5 or higher after Summer 2014 returned at a much higher rate (at least 72\%) compared to students with a USA GPA of 2.0 or lower (37\%). Furthermore, 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).

## Logistic Regression Results

The focus of this study was to determine which student characteristics (inputs) and environmental characteristics (institutional/other support characteristics) can be used to best predict the retention 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 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, five 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 two outcome variables known after the Fall 2013 semester: 1) whether the student received a JagAlert during Fall 2013 and 2) whether the student was placed on probation after Fall 2013 to see what happened when these outcomes were used as predictors of retention. The fourth and fifth models tested a different outcome variable known after the Summer 2014 semester. The fourth model tested the number of USA hours earned after Summer 2014 and the fifth model tested the USA GPA after Summer 2014 to see what happened when these outcomes were used as individual 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 1,684 students for the first and second models to a high of 1,825 students for the third model. The retention rate for this subset of 1,684 students was $72 \%$. With a similar retention rate ( $72 \%$ compared to $71 \%$ ) and 1,684 students representing $92 \%$ 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 only one step (see Table 5). The final step (step 1) of the first model showed the model correctly classified students in this cohort who returned $98.2 \%$ of the time and students who did not return $6.1 \%$ of the time for an overall classification rate of $72.1 \%$.

Table 5: Input Model Classification Table ${ }^{a}$

|  |  |  |  | Predicte |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Observe |  |  | Retu |  | Percentage |
|  |  |  | No | Yes | Correct |
| Step 1 | Returned | No | 29 | 448 | 6.1 |
|  |  | Yes | 22 | 1185 | 98.2 |
|  | Overall Per | entage |  |  | 72.1 |

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=20 years or older, region=Florida service area, high school GPA=2.5 or lower, and ACT Composite score=18 or lower). Values greater than " 1 " $(\operatorname{Exp} B)$ indicated the odds of the outcome (student returning) was higher compared to the selected comparison group. Values less than " 1 " indicated the odds of the outcome (student returning) was lower compared to the selected comparison group.

In the first model (see Table 6), high school GPA was significant in the first step. The first step of the model showed the odds ( $\operatorname{Exp} B$ ) of a student returning was greater for a student in the three higher high school GPA comparison groups (2.51-3.0 $=1.875,3.01-3.5=2.659$, and $3.51-4.0=5.692$ ) than for a student with a high school GPA of 2.5 or lower. Additionally, the confidence intervals (95\%) indicated the odds of a student returning was greater for a student in the three higher high school GPA comparison groups than for a student with a high school GPA of 2.5 or lower since the confidence intervals for the three higher high school GPA comparison groups did not encompass an odds value less than one.

Table 6: Input Model Final Variables in the Equation

|  |  | B | S.E. | Wald | df | Sig. | $\operatorname{Exp}(B)$ | $\begin{gathered} \text { 95\% C.I. for } \\ \text { EXP(B) } \end{gathered}$ |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Lower |  |  |  |  |  | Upper |
| Step $1^{\text {a }}$ | HS GPA 2.5 or lower |  |  |  | 82.920 | 3 | . 000 |  |  |  |
|  | HS GPA 2.51-3.0 | . 629 | . 306 | 4.217 | 1 | . 040 | 1.875 | 1.029 | 3.418 |
|  | HS GPA 3.01-3.5 | . 978 | . 298 | 10.788 | 1 | . 001 | 2.659 | 1.484 | 4.767 |
|  | HS GPA 3.51-4.0 | 1.739 | . 297 | 34.394 | 1 | . 000 | 5.692 | 3.183 | 10.179 |
|  | Constant | -. 276 | . 283 | . 955 | 1 | . 329 | . 759 |  |  |

a. Variable(s) entered on step 1: HS GPA.

## 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 USA freshman scholarship=no, whether the student received some other type of scholarship=no, whether the student received a Pell Grant=no, whether the student lived on or off campus=off campus, whether the student participated in a learning community=no, whether the student took Freshman Seminar=no, which college housed the major the student selected at initial enrollment=Arts \& Sciences, and orientation session attended=either the August, Adult, a transfer, or an unknown orientation session).

The second model consisted of three steps (see Table 7). In comparison to the first model, the correct classification rate for the second model increased to $98.7 \%$ for returning students while the classification rate for the second model decreased to $5.0 \%$ for students who did not return. The overall correct classification rate for the second model was $72.1 \%$.

Table 7: Input and Environmental Model Classification Table ${ }^{\text {a }}$

| Observed |  | Predicted |  |  |
| :--- | :--- | ---: | ---: | ---: |
|  |  | Returned |  | Percentage <br> Correct |
|  |  | No | Yes | 5.2 |
|  | Step 1 | Returned | No | 25 |
|  |  | Yes | 452 | 98.7 |
|  |  | Overall Percentage | 16 | 1191 |

a. The cut value is .500

Once again, high school GPA was significant in the final step (step 3) of the second model (see Table 8). In addition, received USA freshman scholarship, received some other type of scholarship, and housing on campus were significant in the final step of the second model (step 3).

Table 8: Input and Environmental Model Final Variables in the Equation

|  |  | B | S.E. | Wald | Df | Sig. | Exp(B) | $\begin{gathered} \text { 95\% C.I. for } \\ \text { EXP(B) } \\ \hline \end{gathered}$ |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Lower |  |  |  |  |  | Upper |
| Step $1^{\text {a }}$ | HS GPA 2.5 or lower |  |  |  | 84.797 | 3 | . 000 |  |  |  |
|  | HS GPA 2.51-3.0 | . 677 | . 309 | 4.788 | 1 | . 029 | 1.967 | 1.073 | 3.606 |
|  | HS GPA 3.01-3.5 | 1.045 | . 301 | 12.042 | 1 | . 001 | 2.843 | 1.576 | 5.129 |
|  | HS GPA 3.51-4.0 | 1.803 | . 300 | 36.165 | 1 | . 000 | 6.068 | 3.372 | 10.920 |
|  | Received Other Scholarship | . 666 | . 190 | 12.271 | 1 | . 000 | 1.946 | 1.341 | 2.824 |
|  | Constant | -. 409 | . 288 | 2.023 | 1 | . 155 | . 664 |  |  |
| Step $2^{\text {b }}$ | HS GPA 2.5 or lower |  |  | 86.482 | 3 | . 000 |  |  |  |
|  | HS GPA 2.51-3.0 | . 683 | . 310 | 4.871 | 1 | . 027 | 1.980 | 1.080 | 3.632 |
|  | HS GPA 3.01-3.5 | 1.058 | . 301 | 12.333 | 1 | . 000 | 2.882 | 1.596 | 5.203 |
|  | HS GPA 3.51-4.0 | 1.826 | . 300 | 36.975 | 1 | . 000 | 6.209 | 3.447 | 11.185 |
|  | No Other Scholarship | . 657 | . 190 | 11.898 | 1 | . 001 | 1.929 | 1.328 | 2.802 |
|  | Housing On Campus | . 271 | . 113 | 5.782 | 1 | . 016 | 1.312 | 1.051 | 1.636 |
|  | Constant | -. 579 | . 297 | 3.807 | 1 | . 051 | . 561 |  |  |
| Step 3 ${ }^{\text {c }}$ | HS GPA 2.5 or lower |  |  | 48.213 | 3 | . 000 |  |  |  |
|  | HS GPA 2.51-3.0 | . 634 | . 310 | 4.167 | 1 | . 041 | 1.885 | 1.026 | 3.463 |
|  | HS GPA 3.01-3.5 | . 930 | . 306 | 9.229 | 1 | . 002 | 2.534 | 1.391 | 4.617 |
|  | HS GPA 3.51-4.0 | 1.592 | . 315 | 25.504 | 1 | . 000 | 4.912 | 2.648 | 9.110 |
|  | Received USA Freshman Scholarship | . 314 | . 130 | 5.861 | 1 | . 015 | 1.369 | 1.062 | 1.766 |
|  | Received Other Scholarship | . 675 | . 191 | 12.466 | 1 | . 000 | 1.963 | 1.350 | 2.855 |
|  | Housing On Campus | . 302 | . 114 | 7.040 | 1 | . 008 | 1.352 | 1.082 | 1.690 |
|  | Constant | -. 608 | . 297 | 4.185 | 1 | . 041 | . 544 |  |  |

a. Variable(s) entered on step 1: Received Other Scholarship.
b. Variable(s) entered on step 2: Housing On Campus.
c. Variable(s) entered on step 3: Received USA Freshman Scholarship.

The final step (step 3) of the second model showed the odds $(\operatorname{Exp} B)$ of a student returning was greater for a student in the three higher high school GPA comparison groups (2.51-3.0=1.885, 3.01-3.5=2.534, and 3.51-4.0=4.912) than for a student with a high school GPA of 2.5 or lower. Additionally, the confidence intervals (95\%) indicated the odds of a student returning was greater for a student in the three higher high school GPA comparison groups than for a student with a high school GPA of 2.5 or lower since the confidence intervals for the three higher high school GPA comparison groups did not encompass an odds value less than one.

When considering the impact of USA freshman scholarships, the final step (step 3) of the second model showed the odds $(\operatorname{Exp} B)$ of a student returning was greater for a student who received a USA freshman scholarship (1.369) than for a student who did not receive a USA freshman scholarship. The confidence interval (95\%) also supported this finding because the odds for a student returning who received a USA freshman scholarship did not encompass an odds value less than one.

Similarly, a review of the impact of other scholarships showed in the final step (step 3) of the second model the odds $(\operatorname{Exp} B)$ of a student returning was greater for a student who received some other type of scholarship (1.963) than for a student who did not receive some other type of scholarship. The confidence interval ( $95 \%$ ) also supported this finding because the odds for a student returning who received some other type of scholarship did not encompass an odds value less than one.

Lastly, when considering the impact of housing, the final step (step 3) of the second model showed the odds $(\operatorname{Exp} B)$ of a student returning was greater for a student who lived in housing on campus (1.352) than for a student who did not live on campus. The confidence interval (95\%) also supported this finding because the odds for a student returning who lived in housing on campus did not encompass an odds value less than one.

## Model 3, Model 4, and Model 5: Logistic Regression Outcome Variable Models

Since outcomes of student success are different from inputs (student characteristics or institutional/other support characteristics), the third, fourth, and fifth models only included outcomes of interest at two different points in time after the Fall 2013 semester had already begun. The third model included outcomes known after the Fall 2013 semester ended (number of courses the student received a JagAlert during Fall 2013 and probation status after Fall 2013). The fourth model (number of hours earned after Summer 2014) and fifth model (USA GPA the student attained after Summer 2014) included a different outcome variable known after the Summer 2014 semester ended. 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, the third, fourth, and fifth models can only be used after the Fall 2013 semester (third model) or Summer 2014 semester (fourth and fifth models) ended.

Model 3: Logistic Regression with Outcome Variables After Fall 2013
The third model included outcome variables known after Fall 2013. For each outcome variable included in the third model a comparison group was selected (JagAlert during Fall 2013=received a JagAlert in multiple courses and whether the student was placed on probation=yes).

The third model (see Table 9) consisted of two steps. In comparison to the first and second model, the correct classification rate for the third model decreased to $89.9 \%$ for returning students. However, in comparison to the previous two models, the classification rate for the third model dramatically increased to $47.5 \%$ for students who did not return since this snapshot included data known after the end of the Fall 2013 semester instead of pre-Fall 2013 semester data based on student characteristics and institutional or other support characteristics. The overall correct classification rate for the third model was $77.6 \%$.

Table 9: End of Fall 2013 Outcome Model Classification Table ${ }^{\text {a }}$

| Observed |  |  | Predicted |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Returned |  | Percentage Correct |
|  |  |  | No | Yes |  |
| Step 1 | Returned | No | 251 | 277 | 47.5 |
|  |  | Yes | 131 | 1166 | 89.9 |
|  | Overall Percentage |  |  |  | 77.6 |
| Step 2 | Returned | No | 251 | 277 | 47.5 |
|  |  | Yes | 131 | 1166 | 89.9 |
|  | Overall Pe | entage |  |  | 77.6 |

a. The cut value is .500

In the final step (step 2) of the third model, the probation status and JagAlert variables were significant (see Table 10). The final step (step 2) of the third model showed the odds $(\operatorname{Exp} B)$ of a student returning was much greater for a student who was not on probation (5.743) than for a student who was placed on probation after Fall 2013. The confidence interval (95\%) also supported this finding because the odds for a student returning who was not on probation did not encompass an odds value less than one.

The final step (step 2) of the third model also showed the odds $(\operatorname{Exp} B)$ of a student returning was greater for a student who did not receive a JagAlert (2.267) and for a student who received a JagAlert in only one course (1.749) than for a student who received a JagAlert in multiple courses during Fall 2013. The confidence intervals (95\%) also supported this finding because the odds for a student returning who did not receive a JagAlert or who received a JagAlert in only one course did not encompass an odds value less than one.

Table 10: End of Fall 2013 Outcome Model Final Variables in the Equation

|  |  | B | S.E. | Wald | df | Sig. | $\operatorname{Exp}(\mathrm{B})$ | $\begin{gathered} \text { 95\% C.I. for } \\ \text { EXP(B) } \end{gathered}$ |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Lower |  |  |  |  |  | Upper |
| $\begin{aligned} & \text { Step } 1^{\mathrm{a}} \\ & \text { Step } 2^{\mathrm{b}} \end{aligned}$ | Not On Probation After Fall 2013 |  | 2.088 | . 127 | 270.926 | 1 | . 000 | 8.065 | 6.290 | 10.341 |
|  | Constant | -. 650 | . 108 | 36.396 | 1 | . 000 | . 522 |  |  |
|  | Multiple Course JagAlert During Fall 2013 |  |  | 32.775 | 2 | . 000 |  |  |  |
|  | No JagAlert During Fall 2013 | . 818 | . 146 | 31.581 | 1 | . 000 | 2.267 | 1.704 | 3.016 |
|  | 1 Course JagAlert During Fall 2013 | . 559 | . 148 | 14.215 | 1 | . 000 | 1.749 | 1.308 | 2.339 |
|  | Not On Probation After Fall 2013 | 1.748 | . 138 | 159.307 | 1 | . 000 | 5.743 | 4.378 | 7.533 |
|  | Constant | -. 868 | . 118 | 53.742 | 1 | . 000 | . 420 |  |  |

a. Variable(s) entered on step 1: Probation Status After Fall 2013.
b. Variable(s) entered on step 2: Received JagAlert During Fall 2013.

## Model 4: Logistic Regression with USA Hours Earned After Summer 2014 Outcome Variable

The fourth model included the USA hours earned after the end of the Summer 2014 semester. The comparison group selected for the fourth model was zero to six hours earned after the end of the Summer 2014 semester. Since the fourth model only included one variable, the model consisted of one step (see Table 11). The correct classification rate for the fourth model for returning students ( $91.3 \%$ ) was lower than the first and second models, but higher than the third model. However, in comparison to the other three models, the correct classification rate was much higher for students who did not return (69.0\%) since this snapshot included data known after the end of the Summer 2014 semester instead of pre-Fall 2013 semester data based on student characteristics and institutional or other support characteristics. The overall correct classification rate for the fourth model was $85.1 \%$.

Table 11: USA Hours Earned Outcome Model Classification Table ${ }^{\text {a }}$

| Observed |  |  | Predicted |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Returned |  | Percentage Correct |
|  |  |  | No | Yes |  |
| Step 1 | Returned | No | 343 | 154 | 69.0 |
|  |  | Yes | 112 | 1182 | 91.3 |
|  | Overall Pe | entage |  |  | 85.1 |

a. The cut value is .500

The fourth model showed the odds $(\operatorname{Exp} B)$ of a student returning was greater for a student with more hours earned ( $6.5-12=1.988,12.5-18=6.376,18.5-24=21.925,24.5-30=55.794,30.5$ or more=200.560) than for a student with six or fewer hours earned at the end of Summer 2014 (see Table 12). Additionally, the confidence intervals ( $95 \%$ ) indicated the odds of a student returning was greater for a student in the five higher USA hours earned comparison groups than for a student with zero to six USA hours earned since the confidence intervals for the five higher USA hours earned comparison groups did not encompass an odds value less than one.

Table 12: USA Hours Earned After Summer 2014 Model Final Variables in the Equation

|  |  | B | S.E. | Wald | df | Sig. | Exp(B) | 95\% C.I.for EXP(B) |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Lower |  |  |  |  |  | Upper |
| Step $1^{\text {a }}$ | USA Hours Earned 0-6 |  |  |  | 480.899 | 5 | . 000 |  |  |  |
|  | USA Hours Earned 6.5-12 | . 687 | . 342 | 4.027 | 1 | . 045 | 1.988 | 1.016 | 3.888 |
|  | USA Hours Earned 12.5-18 | 1.853 | . 308 | 36.233 | 1 | . 000 | 6.376 | 3.488 | 11.656 |
|  | USA Hours Earned 18.5-24 | 3.088 | . 301 | 104.916 | 1 | . 000 | 21.925 | 12.144 | 39.585 |
|  | USA Hours Earned 24.5-30 | 4.022 | . 297 | 182.955 | 1 | . 000 | 55.794 | 31.153 | 99.925 |
|  | USA Hours Earned 30.5 or more | 5.301 | . 332 | 255.697 | 1 | . 000 | 200.560 | 104.727 | 384.089 |
|  | Constant | -2.147 | . 264 | 66.065 | 1 | . 000 | . 117 |  |  |

a. Variable(s) entered on step 1: USA Hours Earned After Summer 2014.

Model 5: Logistic Regression with USA GPA After Summer 2014 Outcome Variable
The fifth model included the USA GPA after the end of the Summer 2014 semester. The comparison group selected for the fifth model was an USA GPA of 2.0 or lower after the end of the Summer 2014 semester. Since the fifth model only included one variable, the model consisted of one step (see Table 13). The correct classification rate for the fifth model for returning students (87.2\%) was lower than the other four models. The correct classification rate for the fifth model for students who did not return (56.5\%) was higher than the first, second, and third models, but lower than the fourth model. The overall correct classification rate for the fifth model was $78.7 \%$.

Table 13: USA GPA Outcome Model Classification Table ${ }^{\text {a }}$

| Observed |  | Predicted |  |  |
| :--- | :--- | ---: | ---: | ---: |
|  |  | Returned |  | Percentage <br> Correct |
|  |  | No | Yes |  |
| Step 1 | Returned | No | 281 | 216 |
|  |  | Yes | 165 | 1129 |

a. The cut value is .500

The fifth model showed the odds $(\operatorname{Exp} B)$ of a student returning was greater for a student with a higher USA GPA (2.01-2.5=4.386, 2.51-3.0=8.097, 3.01-3.5=11.520, 3.51-4.0 $=15.814$ ) than for a student with an USA GPA of 2.0 or lower at the end of Summer 2014 (see Table 14). In addition, the confidence intervals (95\%) indicated the odds of a student returning was greater for a student in the four higher USA GPA comparison groups than for a student with an USA GPA of 2.0 or lower since the confidence Institutional Research
intervals for the four higher USA GPA comparison groups did not encompass an odds value less than one.

Table 14: USA GPA After Summer 2014 Model Final Variables in the Equation

|  |  | B | S.E. | Wald | df | Sig. | Exp(B) | 95\% C.I.for EXP(B) |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Lower |  |  |  |  |  | Upper |
| Step $1^{\text {a }}$ | USA GPA 2.0 or lower |  |  |  | 332.201 | 4 | . 000 |  |  |  |
|  | USA GPA 2.01-2.5 | 1.478 | . 169 | 76.322 | 1 | . 000 | 4.386 | 3.148 | 6.111 |
|  | USA GPA 2.51-3.0 | 2.091 | . 176 | 141.777 | 1 | . 000 | 8.097 | 5.739 | 11.424 |
|  | USA GPA 3.01-3.5 | 2.444 | . 179 | 185.950 | 1 | . 000 | 11.520 | 8.108 | 16.370 |
|  | USA GPA 3.51-4.0 | 2.761 | . 203 | 184.709 | 1 | . 000 | 15.814 | 10.620 | 23.548 |
|  | Constant | -. 532 | . 098 | 29.468 | 1 | . 000 | . 587 |  |  |

a. Variable(s) entered on step 1: USA GPA After Summer 2014.

## 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 USA retention rates to 13 peer institutions (see Table 15). A five year retention rate trend based on the latest available retention rate data in IPEDS showed the USA retention rate was low compared to the other peer institutions over this five year time period. The USA retention rate over this five year time period ranged from a low of $65 \%$ for the 2010 freshman cohort to a high of $67 \%$ for the 2007 and 2008 freshman cohorts. The retention rate of peer institutions over this five year time period ranged from a low of $60 \%$ for the University of Texas at Arlington 2007 freshman cohort to a high of 83\% for the Florida International University 2009 freshman cohort and the University of North Florida 2008, 2009, and 2011 freshman cohorts.

Table 15: Five Year Retention Rate Peer Comparisons * Ranked by 2011 Cohort Retention Rate * High to Low

| Institution Name | $\mathbf{2 0 1 1}$ <br> Cohort <br> Retention | $\mathbf{2 0 1 0}$ <br> Cohort <br> Retention | $\mathbf{2 0 0 9}$ <br> Cohort <br> Retention | $\mathbf{2 0 0 8}$ <br> Cohort <br> Retention | $\mathbf{2 0 0 7}$ <br> Cohort <br> Retention |
| :--- | :---: | :---: | :---: | :---: | :---: |
| University of North Florida | 83 | 81 | 83 | 83 | 78 |
| Florida International University | 82 | 82 | 83 | 81 | 81 |
| Old Dominion University | 80 | 80 | 80 | 80 | 80 |
| University of Massachusetts-Boston | 79 | 75 | 75 | 77 | 75 |
| Florida Atlantic University | 78 | 79 | 80 | 79 | 75 |
| Texas State University - San Marcos | 76 | 79 | 79 | 79 | 77 |
| University of Memphis | 76 | 77 | 78 | 76 | 75 |
| University of North Texas | 76 | 78 | 78 | 76 | 75 |
| The University of Montana | 74 | 72 | 74 | 73 | 72 |
| Indiana University-Purdue University-Indianapolis | 72 | 72 | 74 | 72 | 68 |
| University of Texas at Arlington | 72 | 71 | 70 | 65 | 60 |
| University of Nebraska at Omaha | 72 | 73 | 73 | 72 | 69 |
| University of South Alabama | 66 | 65 | 66 | 67 | 67 |
| University of New Orleans | 65 | 67 | 64 | 69 | 69 |

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 support and other support provided to a student (environmental variables), just like with the 2007 through 2012 freshman cohorts, the orientation session students in the 2013 cohort attended provided a significant predictor of student retention, with students attending the earlier Freshman Summer orientation sessions more likely to return 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.

Previous Institutional Research studies have looked at the contribution of USA freshman scholarships to recruitment and retention goals. As with earlier studies, the importance of awarding USA freshman scholarships for students was clear. Additional USA freshman scholarships should also be considered in order to attract top students to the institution since the data suggests students with USA freshman scholarships are more likely to return to continue their studies at USA the following year.

This annual retention study also compared retention of freshmen who participated in a learning community to freshmen who did not participate in a learning community. Freshmen who participated in a learning community were significantly more likely to return to USA the following year. Additionally, freshmen who lived on campus were also significantly more likely to return to USA. Therefore, expanding the number of learning communities for freshmen to participate in and on campus housing for freshmen to live in should also receive further consideration.

Finally, results showed students who received a JagAlert during the Fall 2013 semester in multiple courses for lack of attendance and/or poor academic performance were unlikely to return to USA one year later. A JagAlert is recorded in the middle of the semester which allows time to intervene before the semester concludes. As a result, interventions to assist students who receive a JagAlert are also important, because students who were placed on probation after the Fall 2013 semester ended (34\%) or who had a USA GPA of 2.0 or lower due to poor academic performance after the Summer 2014 semester was completed (37\%) were less likely to return to USA one year later than students who received a JagAlert in multiple courses during the Fall 2013 semester (51\%).

## Future Retention Research

This report is the first of two retention studies about the 2013 freshman cohort that will be completed by the Office of Institutional Research during the Fall 2014 semester. The second retention study will use National Student Clearinghouse data to explore the issue of "Where did non-returning freshmen in the 2013 cohort 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 * Group Statistics

| Gender * Group Statistics |  |  |  |  |  |  |
| :--- | :--- | ---: | ---: | ---: | ---: | :---: |
| Returned | Gender T-Test | N | Mean | Std. Deviation | Std. Error Mean |  |
|  | Male | 798 | .70 | .459 | .016 |  |
|  | Female | 1027 | .72 | .449 | .014 |  |

Gender * Independent Samples Test

|  | Levene's Test for Equality of Variances |  | t-test for Equality of Means |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | F | Sig. | t | df | Sig. (2tailed) | Mean Difference | Std. Error Difference | 95\% Confidence Interval of the Difference |  |
|  |  |  |  |  |  |  |  | Lower | Upper |
| $\begin{aligned} & \text { Returned } \text { Equal variances assumed } \\ & \text { Equal variances not assumed }\end{aligned}$ | 4.379 | . 037 | $\begin{aligned} & -1.054 \\ & -1.051 \\ & \hline \end{aligned}$ | $\begin{array}{r} 1823 \\ 1694.054 \\ \hline \end{array}$ | $\begin{array}{r} .292 \\ .294 \\ \hline \end{array}$ | $\begin{array}{r} -.023 \\ -.023 \\ \hline \end{array}$ | $\begin{aligned} & .021 \\ & .021 \\ & \hline \end{aligned}$ | $\begin{array}{r} -.065 \\ -.065 \\ \hline \end{array}$ | $\begin{array}{r} .019 \\ .020 \\ \hline \end{array}$ |

USA Freshman Scholarship * Group Statistics

|  | USA Freshman Scholarship | N | Mean | Std. Deviation | Std. Error Mean |
| :--- | :--- | ---: | ---: | ---: | ---: |
| Returned | No | 865 | .63 | .482 | .016 |
|  | Yes | 960 | .78 | .415 | .013 |

USA Freshman Scholarship * Independent Samples Test

|  | Levene's Test for Equality of Variances |  | t-test for Equality of Means |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | F | Sig. | t | df | Sig. (2tailed) | Mean Difference | Std. Error Difference | 95\% Confidence Interval of the Difference |  |
|  |  |  |  |  |  |  |  | Lower | Upper |
| Returned <br>  <br>  <br>  <br> Equal variances assumed variances not assumed | 179.619 | . 000 | $\begin{array}{l\|} \hline-6.881 \\ -6.828 \\ \hline \end{array}$ | $\begin{array}{r} 1823 \\ 1714.902 \\ \hline \end{array}$ | $\begin{aligned} & .000 \\ & .000 \\ & \hline \end{aligned}$ | $\begin{aligned} & \hline-.144 \\ & -.144 \end{aligned}$ | $\begin{aligned} & .021 \\ & .021 \end{aligned}$ | -. 186 | -.103 -.103 |

Other Scholarship * Group Statistics

|  | Other Scholarship | N | Mean | Std. Deviation | Std. Error Mean |
| :--- | :--- | ---: | ---: | ---: | ---: |
| Returned | No | 1590 | .69 | .461 | .012 |
|  | Yes | 235 | .82 | .384 | .025 |

Other Scholarship * Independent Samples Test

|  | Levene's Test for Equality of Variances |  | t-test for Equality of Means |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | F | Sig. | t | df | Sig. (2tailed) | Mean Difference | Std. Error Difference | 95\% Confidence Interval of the Difference |  |
|  |  |  |  |  |  |  |  | Lower | Upper |
| Returned Equal variances assumed <br>  Equal variances not assumed | 98.061 | . 000 | $\begin{aligned} & -4.021 \\ & -4.602 \\ & \hline \end{aligned}$ | $\begin{array}{r} 1823 \\ 341.976 \\ \hline \end{array}$ | $\begin{aligned} & .000 \\ & .000 \\ & \hline \end{aligned}$ | $\begin{array}{r} -.127 \\ -.127 \\ \hline \end{array}$ | $\begin{array}{r} .032 \\ .028 \\ \hline \end{array}$ | -.189 <br> -.181 | $\begin{array}{r} -.065 \\ -.073 \\ \hline \end{array}$ |


| Pell Grant * Group Statistics |  |  |  |  |  |  |  |  |  |  |
| :--- | :--- | ---: | ---: | ---: | ---: | :---: | :---: | :---: | :---: | :---: |
| Pell Grant |  |  |  |  |  |  | N | Mean | Std. Deviation | Std. Error Mean |
| Returned | No | 1062 | .73 | .443 | .014 |  |  |  |  |  |
|  | Yes | 763 | .68 | .467 | .017 |  |  |  |  |  |

Pell Grant * Independent Samples Test

|  | Levene's Test for Equality of Variances |  | t-test for Equality of Means |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | F | Sig. | t | df | Sig. (2tailed) | Mean Difference | Std. Error Difference | 95\% Confidence Interval of the Difference |  |
|  |  |  |  |  |  |  |  | Lower | Upper |
| Returned Equal variances assumed <br>  Equal variances not assumed | 22.727 | . 000 | $\begin{aligned} & \hline 2.436 \\ & 2.415 \end{aligned}$ | $\begin{array}{r} 1823 \\ 1589.076 \end{array}$ | $\begin{aligned} & \hline .015 \\ & .016 \end{aligned}$ | $\begin{aligned} & .052 \\ & .052 \end{aligned}$ | $\begin{aligned} & \hline .021 \\ & .022 \end{aligned}$ | $\begin{aligned} & .010 \\ & .010 \\ & \hline \end{aligned}$ | $\begin{aligned} & .095 \\ & .095 \end{aligned}$ |

Housing * Group Statistics

|  | Housing | N | Mean | Std. Deviation | Std. Error Mean |
| :--- | :--- | ---: | ---: | ---: | ---: |
| Returned | Off Campus | 762 | .68 | .466 | .017 |
|  | On Campus | 1063 | .73 | .444 | .014 |

## Housing * Independent Samples Test



Learning Community * Group Statistics

|  | Learning Community | N | Mean | Std. Deviation | Std. Error Mean |
| :--- | :--- | ---: | ---: | ---: | ---: |
| Returned | No | 986 | .69 | .464 | .015 |
|  | Yes | 839 | .74 | .439 | .015 |

Learning Community * Independent Samples Test

|  | Levene's Test for Equality of Variances |  | t-test for Equality of Means |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | F | Sig. | t | df | Sig. (2tailed) | Mean Difference | Std. Error Difference | 95\% Confidence Interval of the Difference |  |
|  |  |  |  |  |  |  |  | Lower | Upper |
| Returne Equal variances assumed <br> d Equal variances not assumed | 24.676 | . 000 | $\begin{aligned} & \hline-2.461 \\ & -2.472 \\ & \hline \end{aligned}$ | $\begin{array}{r} \hline 1823 \\ 1802.317 \\ \hline \end{array}$ | $\begin{aligned} & \hline .014 \\ & .014 \\ & \hline \end{aligned}$ | $\begin{aligned} & \hline-052 \\ & -.052 \\ & \hline \end{aligned}$ | $\begin{aligned} & .021 \\ & .021 \\ & \hline \end{aligned}$ | -.094 -.094 | $\begin{array}{r} \hline-.011 \\ -.011 \\ \hline \end{array}$ |

Freshman Seminar * Group Statistics

|  | Took Freshman Seminar | N | Mean | Std. Deviation | Std. Error Mean |
| :--- | :--- | ---: | ---: | ---: | ---: |
| Returned | No | 590 | .72 | .450 | .019 |
|  | Yes | 1235 | .71 | .455 | .013 |

Freshman Seminar * Independent Samples Test

|  | Levene's Test for Equality of Variances |  | t-test for Equality of Means |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | F | Sig. | t | df | Sig. (2tailed) | Mean Difference | Std. Error Difference | 95\% Confidence Interval of the Difference |  |
|  |  |  |  |  |  |  |  | Lower | Upper |
| Returned <br>  <br>  <br>  <br> Equal variances assumed <br> Equiances not assumed | 1.095 | . 296 | $\begin{array}{r} .518 \\ .520 \\ \hline \end{array}$ | $\begin{array}{r} 1823 \\ 1172.241 \\ \hline \end{array}$ | $\begin{array}{r} .604 \\ .603 \\ \hline \end{array}$ | $\begin{aligned} & .012 \\ & .012 \\ & \hline \end{aligned}$ | $\begin{aligned} & \hline .023 \\ & .023 \\ & \hline \end{aligned}$ | $\begin{array}{r} \hline .033 \\ -.033 \\ \hline \end{array}$ | $\begin{array}{r} .056 \\ .056 \\ \hline \end{array}$ |

Probation After Fall 2013 * Group Statistics

|  | Probation After Fall 2013 | N | Mean | Std. Deviation | Std. Error Mean |
| :--- | :--- | ---: | ---: | ---: | ---: |
| Returned | No | 1443 | .81 | .394 | .010 |
|  | Yes | 382 | .34 | .475 | .024 |

Probation After Fall 2013 * Independent Samples Test

|  | Levene's Test for Equality of Variances |  | t-test for Equality of Means |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | F | Sig. | t | df | Sig. (2tailed) | Mean Difference | Std. Error Difference | 95\% Confidence Interval of the Difference |  |
|  |  |  |  |  |  |  |  | Lower | Upper |
| Returned Equal variances assumed <br> Equal variances not assumed | $\begin{array}{r} \hline 116.20 \\ 8 \end{array}$ | . 000 | $\begin{aligned} & 19.605 \\ & 17.592 \end{aligned}$ | $\begin{array}{r} 1823 \\ 527.586 \end{array}$ | $\begin{aligned} & .000 \\ & .000 \\ & \hline \end{aligned}$ | .465 .465 | .024 .026 | .419 .413 | .512 .517 |

## ANOVA Tables

Race * Multiple Comparisons
Dependent Variable: Returned
Games-Howell

| (I) Race | (J) Race | Games-Howell |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | MeanDifference (I-J) | Std. <br> Error | Sig. | 95\% Confidence Interval |  |
|  |  |  |  |  | Lower Bound | Upper Bound |
| White | African-American | . 019 | . 025 | . 989 | -. 06 | . 09 |
|  | Asian | -. 116 | . 056 | . 375 | -. 29 | . 05 |
|  | Hispanic | -. 033 | . 062 | . 998 | -. 22 | . 16 |
|  | Multiracial | -. 031 | . 057 | . 998 | -. 20 | . 14 |
|  | Non-Resident Alien | -. $249{ }^{*}$ | . 046 | . 000 | -. 39 | -. 10 |
|  | Other | . 041 | . 093 | . 999 | -. 26 | . 34 |
| African-American | White | -. 019 | . 025 | . 989 | -. 09 | . 06 |
|  | Asian | -. 135 | . 058 | . 248 | -. 31 | . 04 |
|  | Hispanic | -. 052 | . 064 | . 982 | -. 25 | . 14 |
|  | Multiracial | -. 050 | . 059 | . 979 | -. 23 | . 13 |
|  | Non-Resident Alien | -. $268{ }^{*}$ | . 049 | . 000 | -. 42 | -. 12 |
|  | Other | . 022 | . 095 | 1.000 | -. 28 | . 32 |
| Asian | White | . 116 | . 056 | . 375 | -. 05 | . 29 |
|  | African-American | . 135 | . 058 | . 248 | -. 04 | . 31 |
|  | Hispanic | . 083 | . 081 | . 947 | -. 16 | . 33 |
|  | Multiracial | . 085 | . 077 | . 925 | -. 15 | . 32 |
|  | Non-Resident Alien | -. 133 | . 069 | . 474 | -. 34 | . 08 |
|  | Other | . 157 | . 107 | . 763 | -. 17 | . 49 |
| Hispanic | White | . 033 | . 062 | . 998 | -. 16 | . 22 |
|  | African-American | . 052 | . 064 | . 982 | -. 14 | . 25 |
|  | Asian | -. 083 | . 081 | . 947 | -. 33 | . 16 |
|  | Multiracial | . 002 | . 081 | 1.000 | -. 24 | . 25 |
|  | Non-Resident Alien | -. 216 | . 074 | . 069 | -. 44 | . 01 |
|  | Other | . 074 | . 110 | . 994 | -. 27 | . 41 |
| Multiracial | White | . 031 | . 057 | . 998 | -. 14 | . 20 |
|  | African-American | . 050 | . 059 | . 979 | -. 13 | . 23 |
|  | Asian | -. 085 | . 077 | . 925 | -. 32 | . 15 |
|  | Hispanic | -. 002 | . 081 | 1.000 | -. 25 | . 24 |
|  | Non-Resident Alien | -. $218^{*}$ | . 070 | . 040 | -. 43 | -. 01 |
|  | Other | . 072 | . 108 | . 994 | -. 26 | . 40 |
| Non-Resident Alien | White | . 249 * | . 046 | . 000 | . 10 | . 39 |
|  | African-American | . $268{ }^{*}$ | . 049 | . 000 | . 12 | . 42 |
|  | Asian | . 133 | . 069 | . 474 | -. 08 | . 34 |
|  | Hispanic | . 216 | . 074 | . 069 | -. 01 | . 44 |
|  | Multiracial | . $218{ }^{*}$ | . 070 | . 040 | . 01 | . 43 |
|  | Other | . 290 | . 102 | . 095 | -. 03 | . 61 |
| Other | White | -. 041 | . 093 | . 999 | -. 34 | . 26 |
|  | African-American | -. 022 | . 095 | 1.000 | -. 32 | . 28 |
|  | Asian | -. 157 | . 107 | . 763 | -. 49 | . 17 |
|  | Hispanic | -. 074 | . 110 | . 994 | -. 41 | . 27 |
|  | Multiracial | -. 072 | . 108 | . 994 | -. 40 | . 26 |
|  | Non-Resident Alien | -. 290 | . 102 | . 095 | -. 61 | . 03 |

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

Age * Multiple Comparisons
Dependent Variable: Returned
Games-Howell

| (I) Age |  | Mean <br> Logistic |  | Std. |  | 95\% Confidence Interval |  |
| :--- | :--- | ---: | ---: | ---: | ---: | ---: | :---: |
|  | (J) Age Logistic | Difference (I-J) | Error | Sig. | Lower Bound | Upper Bound |  |
| 20 years | 17 years or younger | -.028 | .078 | .985 | -.23 | .18 |  |
| or older | 18 years old | -.061 | .064 | .773 | -.23 | .11 |  |
|  | 19 years old | -.034 | .075 | .968 | -.23 | .16 |  |
| 17 years | 20 years or older | .028 | .078 | .985 | -.18 | .23 |  |
| or | 18 years old | -.034 | .047 | .891 | -.16 | .09 |  |
| younger | 19 years old | -.007 | .061 | 1.000 | -.16 | .15 |  |
| 18 years | 20 years or older | .061 | .064 | .773 | -.11 | .23 |  |
| old | 17 years or younger | .034 | .047 | .891 | -.09 | .16 |  |
|  | 19 years old | .027 | .042 | .917 | -.08 | .14 |  |
| 19 years | 20 years or older | .034 | .075 | .968 | -.16 | .23 |  |
| old | 17 years or younger | .007 | .061 | 1.000 | -.15 | .16 |  |
|  | 18 years old | -.027 | .042 | .917 | -.14 | .08 |  |

Region * Multiple Comparisons
Dependent Variable: Returned
Games-Howell

| (I) Region | (J) Region | Mean Difference (I-J) | Std. <br> Error | Sig. | 95\% Confidence Interval |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  | Lower Bound | Upper Bound |
| Mobile or Baldwin County | Rest of Alabama | . 004 | . 024 | 1.000 | -. 06 | . 07 |
|  | Mississippi Service Area | . 015 | . 039 | . 999 | -. 10 | . 13 |
|  | Florida Service Area | . 076 | . 056 | . 750 | -. 09 | . 24 |
|  | Rest of United States | . 062 | . 046 | . 755 | -. 07 | . 20 |
|  | International | -.238* | . 046 | . 000 | -. 38 | -. 10 |
| Rest of Alabama | Mobile or Baldwin County | -. 004 | . 024 | 1.000 | -. 07 | . 06 |
|  | Mississippi Service Area | . 011 | . 040 | 1.000 | -. 10 | . 13 |
|  | Florida Service Area | . 072 | . 057 | . 800 | -. 09 | . 24 |
|  | Rest of United States | . 058 | . 047 | . 815 | -. 08 | . 19 |
|  | International | -. $243{ }^{*}$ | . 047 | . 000 | -. 39 | -. 10 |
| Mississippi Service Area | Mobile or Baldwin County | -. 015 | . 039 | . 999 | -. 13 | . 10 |
|  | Rest of Alabama | -. 011 | . 040 | 1.000 | -. 13 | . 10 |
|  | Florida Service Area | . 061 | . 064 | . 933 | -. 12 | . 25 |
|  | Rest of United States | . 047 | . 056 | . 959 | -. 11 | . 21 |
|  | International | -. $253{ }^{*}$ | . 056 | . 000 | -. 42 | -. 09 |
| Florida Service Area | Mobile or Baldwin County | -. 076 | . 056 | . 750 | -. 24 | . 09 |
|  | Rest of Alabama | -. 072 | . 057 | . 800 | -. 24 | . 09 |
|  | Mississippi Service Area | -. 061 | . 064 | . 933 | -. 25 | . 12 |
|  | Rest of United States | -. 014 | . 069 | 1.000 | -. 21 | . 18 |
|  | International | -.315* | . 069 | . 000 | -. 52 | -. 11 |
| Rest of United States | Mobile or Baldwin County | -. 062 | . 046 | . 755 | -. 20 | . 07 |
|  | Rest of Alabama | -. 058 | . 047 | . 815 | -. 19 | . 08 |
|  | Mississippi Service Area | -. 047 | . 056 | . 959 | -. 21 | . 11 |
|  | Florida Service Area | . 014 | . 069 | 1.000 | -. 18 | . 21 |
|  | International | -.301* | . 061 | . 000 | -. 48 | -. 12 |
| International | Mobile or Baldwin County | . 238 | . 046 | . 000 | . 10 | . 38 |
|  | Rest of Alabama | . $243{ }^{*}$ | . 047 | . 000 | . 10 | . 39 |
|  | Mississippi Service Area | . $253{ }^{*}$ | . 056 | . 000 | . 09 | . 42 |
|  | Florida Service Area | . $315{ }^{*}$ | . 069 | . 000 | . 11 | . 52 |
|  | Rest of United States | . $301{ }^{*}$ | . 061 | . 000 | . 12 | . 48 |

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

High School GPA * Multiple Comparisons Dependent Variable: Returned

Games-Howell

|  |  | Mean <br> (I) HS GPA |  | Std. <br> Error | Sig. | 95\% Confidence Interval |  |
| :--- | :--- | ---: | ---: | ---: | ---: | ---: | :---: |
|  | (J) HS GPA | Lower Bound | Upper Bound |  |  |  |  |
| 2.5 or lower | $2.51-3.0$ | -.155 | .067 | .103 | -.33 | .02 |  |
|  | $3.01-3.5$ | $-.225^{*}$ | .065 | .004 | -.40 | -.06 |  |
|  | $3.51-4.0$ | $-.371^{*}$ | .063 | .000 | -.54 | -.21 |  |
| $2.51-3.0$ | 2.5 or lower | .155 | .067 | .103 | -.02 | .33 |  |
|  | $3.01-3.5$ | -.070 | .034 | .159 | -.16 | .02 |  |
|  | $3.51-4.0$ | $-.216^{*}$ | .030 | .000 | -.29 | -.14 |  |
| $3.01-3.5$ | 2.5 or lower | $.225^{*}$ | .065 | .004 | .06 | .40 |  |
|  | $2.51-3.0$ | .070 | .034 | .159 | -.02 | .16 |  |
|  | $3.51-4.0$ | $-.146^{*}$ | .024 | .000 | -.21 | -.08 |  |
| $3.51-4.0$ | 2.5 or lower | $.371^{*}$ | .063 | .000 | .21 | .54 |  |
|  | $2.51-3.0$ | $.216^{*}$ | .030 | .000 | .14 | .29 |  |
|  | $3.01-3.5$ | $.146^{*}$ | .024 | .000 | .08 | .21 |  |

*. The mean difference is significant at the 0.05 level.
ACT Composite * Multiple Comparisons
Dependent Variable: Returned

| Games-Howell |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| (I) ACT | (J) ACT | Mean <br> Difference (I-J) | Std. <br> Error | Sig. | 95\% Confidence Interval |  |
|  |  |  |  |  | Lower Bound | Upper Bound |
| 18 or lower | 19-20 | . 018 | . 042 | . 998 | -. 10 | . 14 |
|  | 21-23 | -. 046 | . 039 | . 853 | -. 16 | . 07 |
|  | 24-26 | -. 068 | . 040 | . 524 | -. 18 | . 05 |
|  | 27-29 | -. 102 | . 043 | . 174 | -. 23 | . 02 |
|  | 30 or higher | -.151* | . 049 | . 026 | -. 29 | -. 01 |
| 19-20 | 18 or lower | -. 018 | . 042 | . 998 | -. 14 | . 10 |
|  | 21-23 | -. 064 | . 034 | . 429 | -. 16 | . 03 |
|  | 24-26 | -. 086 | . 034 | . 130 | -. 18 | . 01 |
|  | 27-29 | -. $119^{*}$ | . 038 | . 024 | -. 23 | -. 01 |
|  | 30 or higher | -. $169^{*}$ | . 045 | . 003 | -. 30 | -. 04 |
| 21-23 | 18 or lower | . 046 | . 039 | . 853 | -. 07 | . 16 |
|  | 19-20 | . 064 | . 034 | . 429 | -. 03 | . 16 |
|  | 24-26 | -. 022 | . 031 | . 983 | -. 11 | . 07 |
|  | 27-29 | -. 056 | . 036 | . 627 | -. 16 | . 05 |
|  | 30 or higher | -. 105 | . 042 | . 134 | -. 23 | . 02 |
| 24-26 | 18 or lower | . 068 | . 040 | . 524 | -. 05 | . 18 |
|  | 19-20 | . 086 | . 034 | . 130 | -. 01 | . 18 |
|  | 21-23 | . 022 | . 031 | . 983 | -. 07 | . 11 |
|  | 27-29 | -. 034 | . 036 | . 934 | -. 14 | . 07 |
|  | 30 or higher | -. 083 | . 042 | . 367 | -. 20 | . 04 |
| 27-29 | 18 or lower | . 102 | . 043 | . 174 | -. 02 | . 23 |
|  | 19-20 | . $119{ }^{*}$ | . 038 | . 024 | . 01 | . 23 |
|  | 21-23 | . 056 | . 036 | . 627 | -. 05 | . 16 |
|  | 24-26 | . 034 | . 036 | . 934 | -. 07 | . 14 |
|  | 30 or higher | -. 049 | . 046 | . 890 | -. 18 | . 08 |
| 30 or higher | 18 or lower | . $151{ }^{*}$ | . 049 | . 026 | . 01 | . 29 |
|  | 19-20 | . $169{ }^{*}$ | . 045 | . 003 | . 04 | . 30 |
|  | 21-23 | . 105 | . 042 | . 134 | -. 02 | . 23 |
|  | 24-26 | . 083 | . 042 | . 367 | -. 04 | . 20 |
|  | 27-29 | . 049 | . 046 | . 890 | -. 08 | . 18 |

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

## College * Multiple Comparisons

Dependent Variable: Returned
Games-Howell

| (I) College Logistic | (J) College Logistic | Mean Difference (I-J) | Std. <br> Error | Sig. | 95\% Confidence Interval |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  | Lower Bound | Upper Bound |
| AS | AH | -. 013 | . 030 | 1.000 | -. 11 | . 08 |
|  | BU | -. 083 | . 040 | . 442 | -. 21 | . 04 |
|  | CS | -. 068 | . 054 | . 913 | -. 24 | . 10 |
|  | ED | -. 028 | . 050 | . 999 | -. 18 | . 13 |
|  | EG | -. 017 | . 033 | 1.000 | -. 12 | . 08 |
|  | NU | -. 024 | . 034 | . 997 | -. 13 | . 08 |
|  | CE | . 359 | . 334 | . 918 | -2.69 | 3.41 |
| AH | AS | . 013 | . 030 | 1.000 | -. 08 | . 11 |
|  | BU | -. 070 | . 043 | . 737 | -. 20 | . 06 |
|  | CS | -. 055 | . 056 | . 977 | -. 23 | . 12 |
|  | ED | -. 015 | . 053 | 1.000 | -. 18 | . 15 |
|  | EG | -. 004 | . 036 | 1.000 | -. 11 | . 11 |
|  | NU | -. 011 | . 037 | 1.000 | -. 12 | . 10 |
|  | CE | . 372 | . 334 | . 908 | -2.67 | 3.41 |
| BU | AS | . 083 | . 040 | . 442 | -. 04 | . 21 |
|  | AH | . 070 | . 043 | . 737 | -. 06 | . 20 |
|  | CS | . 015 | . 062 | 1.000 | -. 18 | . 21 |
|  | ED | . 055 | . 059 | . 982 | -. 13 | . 24 |
|  | EG | . 066 | . 045 | . 819 | -. 07 | . 20 |
|  | NU | . 059 | . 046 | . 901 | -. 08 | . 20 |
|  | CE | . 442 | . 335 | . 844 | -2.56 | 3.45 |
| CS | AS | . 068 | . 054 | . 913 | -. 10 | . 24 |
|  | AH | . 055 | . 056 | . 977 | -. 12 | . 23 |
|  | BU | -. 015 | . 062 | 1.000 | -. 21 | . 18 |
|  | ED | . 040 | . 069 | . 999 | -. 17 | . 25 |
|  | EG | . 051 | . 058 | . 987 | -. 13 | . 23 |
|  | NU | . 044 | . 058 | . 995 | -. 14 | . 22 |
|  | CE | . 427 | . 337 | . 861 | -2.52 | 3.37 |
| ED | AS | . 028 | . 050 | . 999 | -. 13 | . 18 |
|  | AH | . 015 | . 053 | 1.000 | -. 15 | . 18 |
|  | BU | -. 055 | . 059 | . 982 | -. 24 | . 13 |
|  | CS | -. 040 | . 069 | . 999 | -. 25 | . 17 |
|  | EG | . 011 | . 054 | 1.000 | -. 15 | . 18 |
|  | NU | . 004 | . 055 | 1.000 | -. 16 | . 17 |
|  | CE | . 387 | . 337 | . 898 | -2.58 | 3.35 |
| EG | AS | . 017 | . 033 | 1.000 | -. 08 | . 12 |
|  | AH | . 004 | . 036 | 1.000 | -. 11 | . 11 |
|  | BU | -. 066 | . 045 | . 819 | -. 20 | . 07 |
|  | CS | -. 051 | . 058 | . 987 | -. 23 | . 13 |
|  | ED | -. 011 | . 054 | 1.000 | -. 18 | . 15 |
|  | NU | -. 007 | . 039 | 1.000 | -. 13 | . 11 |
|  | CE | . 376 | . 334 | . 905 | -2.66 | 3.41 |
| NU | AS | . 024 | . 034 | . 997 | -. 08 | . 13 |
|  | AH | . 011 | . 037 | 1.000 | -. 10 | . 12 |
|  | BU | -. 059 | . 046 | . 901 | -. 20 | . 08 |
|  | CS | -. 044 | . 058 | . 995 | -. 22 | . 14 |
|  | ED | -. 004 | . 055 | 1.000 | -. 17 | . 16 |
|  | EG | . 007 | . 039 | 1.000 | -. 11 | . 13 |
|  | CE | . 383 | . 335 | . 899 | -2.65 | 3.41 |

Orientation * Multiple Comparisons * Dependent Variable: Returned * Games-Howell

| (I) Orientation | (J) Orientation | Mean Difference (I-J) | Std. Error | Sig. | 95\% Confidence Interval |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  | Lower Bound | Upper Bound |
| August/Other Orientation (Adult, Transfer, or Unknown) | May Orientation | -.236 ${ }^{*}$ | . 073 | . 037 | -. 46 | -. 01 |
|  | Freshman Session 1 | -.199* | . 046 | . 001 | -. 34 | -. 06 |
|  | Freshman Session 2 | -.157* | . 047 | . 023 | -. 30 | -. 01 |
|  | Freshman Session 3 | -. $154{ }^{*}$ | . 047 | . 026 | -. 30 | -. 01 |
|  | Freshman Session 4 | -. 117 | . 048 | . 234 | -. 26 | . 03 |
|  | Freshman Session 5 | -. 065 | . 052 | . 913 | -. 22 | . 09 |
|  | Freshman Session 6 | -. 016 | . 055 | 1.000 | -. 18 | . 15 |
| May Orientation | August/Other Orientation | . $236{ }^{*}$ | . 073 | . 037 | . 01 | 46 |
|  | Freshman Session 1 | . 037 | . 065 | . 999 | -. 17 | 24 |
|  | Freshman Session 2 | . 079 | . 066 | . 928 | -. 13 | . 29 |
|  | Freshman Session 3 | . 082 | . 065 | . 912 | -. 12 | . 29 |
|  | Freshman Session 4 | . 119 | . 066 | . 628 | -. 09 | . 33 |
|  | Freshman Session 5 | . 171 | . 069 | . 225 | -. 05 | . 39 |
|  | Freshman Session 6 | . 219 | . 071 | . 056 | . 00 | . 44 |
| Freshman Session 1 | August/Other Orientation | .199* | . 046 | . 001 | . 06 | . 34 |
|  | May Orientation | -. 037 | . 065 | . 999 | -. 24 | . 17 |
|  | Freshman Session 2 | . 043 | . 034 | . 916 | -. 06 | . 15 |
|  | Freshman Session 3 | . 045 | . 033 | . 878 | -. 06 | . 15 |
|  | Freshman Session 4 | . 082 | . 035 | . 274 | -. 02 | . 19 |
|  | Freshman Session 5 | .134* | . 040 | . 019 | . 01 | . 26 |
|  | Freshman Session 6 | .183* | . 044 | . 001 | . 05 | . 32 |
| Freshman Session 2 | August/Other Orientation | . 157 | . 047 | . 023 | . 01 | . 30 |
|  | May Orientation | -. 079 | . 066 | . 928 | -. 29 | . 13 |
|  | Freshman Session 1 | -. 043 | . 034 | . 916 | -. 15 | . 06 |
|  | Freshman Session 3 | . 003 | . 035 | 1.000 | -. 10 | . 11 |
|  | Freshman Session 4 | . 040 | . 036 | . 958 | -. 07 | . 15 |
|  | Freshman Session 5 | . $092 \times$ | . 041 | . 328 | -. 03 | . 22 |
|  | Freshman Session 6 | . $140{ }^{*}$ | . 045 | . 038 | . 00 | . 28 |
| Freshman Session 3 | August/Other Orientation | .154* | . 047 | . 026 | . 01 | . 30 |
|  | May Orientation | -. 082 | . 065 | . 912 | -. 29 | . 12 |
|  | Freshman Session 1 | -. 045 | . 033 | . 878 | -. 15 | . 06 |
|  | Freshman Session 2 | -. 003 | . 035 | 1.000 | -. 11 | . 10 |
|  | Freshman Session 4 | . 037 | . 036 | . 970 | -. 07 | . 15 |
|  | Freshman Session 5 | . 089 | . 040 | . 356 | -. 03 | . 21 |
|  | Freshman Session 6 | . $137{ }^{*}$ | . 044 | . 043 | . 00 | . 27 |
| Freshman Session 4 | August/Other Orientation | . 117 | . 048 | . 234 | -. 03 | . 26 |
|  | May Orientation | -. 119 | . 066 | . 628 | -. 33 | . 09 |
|  | Freshman Session 1 | -. 082 | . 035 | . 274 | -. 19 | . 02 |
|  | Freshman Session 2 | -. 040 | . 036 | . 958 | -. 15 | . 07 |
|  | Freshman Session 3 | -. 037 | . 036 | . 970 | -. 15 | . 07 |
|  | Freshman Session 5 | . 052 | . 042 | . 921 | -. 08 | . 18 |
|  | Freshman Session 6 | . 100 | . 046 | . 353 | -. 04 | . 24 |
| Freshman Session 5 | August/Other Orientation | . 065 | . 052 | . 913 | -. 09 | . 22 |
|  | May Orientation | -. 171 | . 069 | . 225 | -. 39 | . 05 |
|  | Freshman Session 1 | -. $134{ }^{*}$ | . 040 | . 019 | -. 26 | -. 01 |
|  | Freshman Session 2 | -. 092 | . 041 | . 328 | -. 22 | . 03 |
|  | Freshman Session 3 | -. 089 | . 040 | . 356 | -. 21 | . 03 |
|  | Freshman Session 4 | -. 052 | . 042 | . 921 | -. 18 | . 08 |
|  | Freshman Session 6 | . 049 | . 049 | . 976 | -. 10 | . 20 |
| Freshman Session 6 | August/Other Orientation | . 016 | . 055 | 1.000 | -. 15 | . 18 |
|  | May Orientation | -. 219 | . 071 | . 056 | -. 44 | . 00 |
|  | Freshman Session 1 | -.183* | . 044 | . 001 | -. 32 | -. 05 |
|  | Freshman Session 2 | -. $140{ }^{*}$ | . 045 | . 038 | -. 28 | . 00 |
|  | Freshman Session 3 | -. $137{ }^{*}$ | . 044 | . 043 | -. 27 | . 00 |
|  | Freshman Session 4 | -. 100 | . 046 | . 353 | -. 24 | . 04 |
|  | Freshman Session 5 | -. 049 | . 049 | . 976 | -. 20 | 10 |

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

JagAlert Fall 2013 * Multiple Comparisons
Dependent Variable: Returned

| (I) JagAlert Fall 2013 (J) JagAlert Fall 2013 |  | Mean <br> Difference (I-J) | Std. <br> Error | Sig. | 95\% Confidence Interval |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Lower Bound |  |  | Upper Bound |
| No JagAlert Fall 2013 | 1 Course w/ JagAlert Fall 2013 |  | .081* | . 024 | . 002 | . 03 | . 14 |
|  | Multiple Courses w/ JagAlert Fall 2013 | . $320{ }^{*}$ | . 025 | . 000 | . 26 | . 38 |
| 1 Course w/ JagAlert Fall 2013 | No JagAlert Fall 2013 Multiple Courses w/ JagAlert Fall 2013 | $\begin{gathered} -.081^{*} \\ .239^{*} \end{gathered}$ | $\begin{aligned} & .024 \\ & .029 \end{aligned}$ | $\begin{aligned} & .002 \\ & .000 \end{aligned}$ | $\begin{array}{r} \hline-.14 \\ .17 \end{array}$ | -.03 .31 |
| Multiple Courses w/ JagAlert Fall 2013 | No JagAlert Fall 2013 1 Course w/ JagAlert Fall 2013 | $\begin{aligned} & \hline-.320^{\prime} \\ & -.239^{*} \end{aligned}$ | $\begin{array}{\|l\|} \hline .025 \\ .029 \end{array}$ | $\begin{aligned} & \hline .000 \\ & .000 \end{aligned}$ | -.38 -.31 | -.26 -.17 |

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

## USA Hours Earned * Multiple Comparisons

Dependent Variable: Returned
Games-Howell

| (I) USA Hours Earned | (J) USA Hours Earned | MeanDifference (I-J) | Std. Error | Sig. | 95\% Confidence Interval |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  | Lower Bound | Upper Bound |
| 0-6 hours | 6.5-12 hours | -. 084 | . 042 | . 337 | -. 20 | . 04 |
|  | 12.5-18 hours | -. $322{ }^{*}$ | . 046 | . 000 | -. 45 | -. 19 |
|  | 18.5-24 hours | -.615* | . 038 | . 000 | -. 72 | -. 50 |
|  | 24.5-30 hours | -. $762{ }^{*}$ | . 029 | . 000 | -. 85 | -. 68 |
|  | 30.5 or more hours | -.854* | . 026 | . 000 | -. 93 | -. 78 |
| 6.5-12 hours | 0-6 hours | . 084 | . 042 | . 337 | -. 04 | . 20 |
|  | 12.5-18 hours | -. $238{ }^{*}$ | . 051 | . 000 | -. 39 | -. 09 |
|  | 18.5-24 hours | -.531** | . 044 | . 000 | -. 66 | -. 40 |
|  | 24.5-30 hours | -.679 ${ }^{*}$ | . 037 | . 000 | -. 78 | -. 57 |
|  | 30.5 or more hours | -. $771{ }^{*}$ | . 034 | . 000 | -. 87 | -. 67 |
| 12.5-18 hours | 0-6 hours | . 322 | . 046 | . 000 | . 19 | . 45 |
|  | 6.5-12 hours | . $238{ }^{*}$ | . 051 | . 000 | . 09 | . 39 |
|  | 18.5-24 hours | -.292** | . 049 | . 000 | -. 43 | -. 15 |
|  | 24.5-30 hours | -. 440 * | . 042 | . 000 | -. 56 | -. 32 |
|  | 30.5 or more hours | -. $532{ }^{*}$ | . 040 | . 000 | -. 65 | -. 42 |
| 18.5-24 hours | 0-6 hours | . 615 | . 038 | . 000 | . 50 | . 72 |
|  | 6.5-12 hours | . $531{ }^{*}$ | . 044 | . 000 | . 40 | . 66 |
|  | 12.5-18 hours | . $292{ }^{*}$ | . 049 | . 000 | . 15 | . 43 |
|  | 24.5-30 hours | -.148* | . 033 | . 000 | -. 24 | -. 05 |
|  | 30.5 or more hours | -.240* | . 030 | . 000 | -. 33 | -. 15 |
| 24.5-30 hours | 0-6 hours | . 762 | . 029 | . 000 | . 68 | . 85 |
|  | 6.5-12 hours | . $679^{*}$ | . 037 | . 000 | . 57 | . 78 |
|  | 12.5-18 hours | . $440{ }^{*}$ | . 042 | . 000 | . 32 | . 56 |
|  | 18.5-24 hours | . $148{ }^{*}$ | . 033 | . 000 | . 05 | . 24 |
|  | 30.5 or more hours | -.092* | . 018 | . 000 | -. 14 | -. 04 |
| 30.5 or more hours | 0-6 hours | . 854 | . 026 | . 000 | . 78 | . 93 |
|  | 6.5-12 hours | .771* | . 034 | . 000 | . 67 | . 87 |
|  | 12.5-18 hours | . $532{ }^{*}$ | . 040 | . 000 | . 42 | . 65 |
|  | 18.5-24 hours | . 240 * | . 030 | . 000 | . 15 | . 33 |
|  | 24.5-30 hours | .092* | . 018 | . 000 | . 04 | . 14 |

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

USA GPA * Multiple Comparisons
Dependent Variable: Returned
Games-Howell

| (I) USA GPA | (J) USA GPA | MeanDifference (I-J) | Std. <br> Error | Sig. | 95\% Confidence Interval |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  | Lower Bound | Upper <br> Bound |
| 2.0 or lower | 2.01-2.5 | -.350* | . 036 | . 000 | -. 45 | -. 25 |
|  | 2.51-3.0 | -. $456{ }^{*}$ | . 031 | . 000 | -. 54 | -. 37 |
|  | 3.01-3.5 | -. 501 * | . 028 | . 000 | -. 58 | -. 42 |
|  | 3.51-4.0 | -. $533{ }^{*}$ | . 028 | . 000 | -. 61 | -. 46 |
| 2.01-2.5 | 2.0 or lower | . 350 | . 036 | . 000 | . 25 | . 45 |
|  | 2.51-3.0 | -.106* | . 035 | . 021 | -. 20 | -. 01 |
|  | 3.01-3.5 | -. $151{ }^{*}$ | . 033 | . 000 | -. 24 | -. 06 |
|  | 3.51-4.0 | -. $182^{*}$ | . 032 | . 000 | -. 27 | -. 10 |
| 2.51-3.0 | 2.0 or lower | . 456 * | . 031 | . 000 | . 37 | . 54 |
|  | 2.01-2.5 | . $106{ }^{*}$ | . 035 | . 021 | . 01 | . 20 |
|  | 3.01-3.5 | -. 045 | . 027 | . 451 | -. 12 | . 03 |
|  | 3.51-4.0 | -. $077{ }^{*}$ | . 026 | . 029 | -. 15 | -. 01 |
| 3.01-3.5 | 2.0 or lower | . 501 " | . 028 | . 000 | . 42 | . 58 |
|  | 2.01-2.5 | . $151{ }^{*}$ | . 033 | . 000 | . 06 | . 24 |
|  | 2.51-3.0 | . 045 | . 027 | . 451 | -. 03 | . 12 |
|  | 3.51-4.0 | -. 032 | . 023 | . 645 | -. 09 | . 03 |
| 3.51-4.0 | 2.0 or lower | . $533{ }^{*}$ | . 028 | . 000 | . 46 | . 61 |
|  | 2.01-2.5 | . $182 \times$ | . 032 | . 000 | . 10 | . 27 |
|  | 2.51-3.0 | .077* | . 026 | . 029 | . 01 | . 15 |
|  | 3.01-3.5 | . 032 | . 023 | . 645 | -. 03 | . 09 |

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


[^0]:    ${ }^{1}$ Astin, A. W. (2002). Assessment for excellence: The philosophy and practice of assessment and evaluation in higher education. American Council on Education, Oryx Press.
    ${ }^{2}$ Input variables: Gender, race/ethnicity, age, region, high school GPA, and ACT Composite score.
    ${ }^{3}$ Environmental variables: USA freshman scholarship, other scholarship, Pell Grant, housing, learning community, Freshman Seminar, college, and orientation session attended.
    ${ }^{4}$ Outcome variables after Fall 2013: Number of courses received a JagAlert and probation status.
    ${ }^{5}$ Outcome variables after Summer 2014: USA hours earned (model 4) and USA GPA (model 5).

[^1]:    ${ }^{6}$ Due to the small number of students with a Hawaiian/Pacific Islander, Native-American, and Unknown IPEDS race/ethnicity, these three subgroups were combined into an "Other" race/ethnicity group.

[^2]:    ${ }^{7}$ Other scholarship includes third party private scholarships that are not considered a USA Freshman scholarship. Institutional Research

[^3]:    ${ }^{8}$ Continuing Education retention is not reported since there were only three students from Continuing Education in this cohort. Institutional Research

[^4]:    ${ }^{9}$ Eleven students attended the Adult orientation session or a Transfer orientation session held in the evening to accommodate adult/working students while 64 students either attended an unknown orientation session or did not attend any of the orientation sessions held for new students. As with previous freshman cohort retention reports, the retention results for students who attended one of these orientation sessions were combined for this analysis.

