1st-to-2nd Year Retention Rates

SAU
81.3%
77.9%
73.5%
NationalComparison
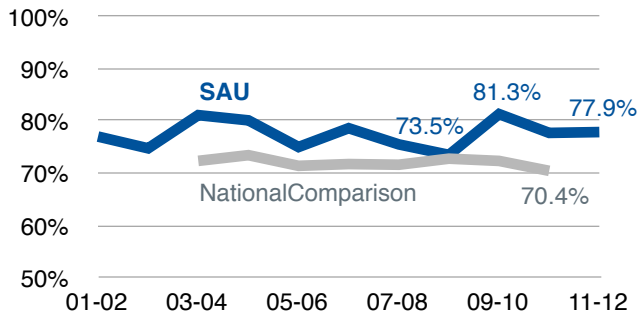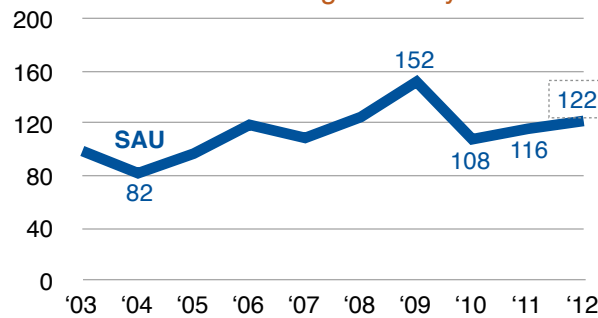70.4%

Comparison Group includes ~200 institutions with "traditional" selectivity (middle 50% of ACT scores between 18-24) offering Master's degrees.

Sources: ACT National Collegiate Retention Rates
2011 StatPak, Informer queries A/B

Number of previous year freshmen not returning for 2nd year

152
122
SAU
108
116
82

Since 2003, a total of 1,129 freshmen have not returned for their second year.
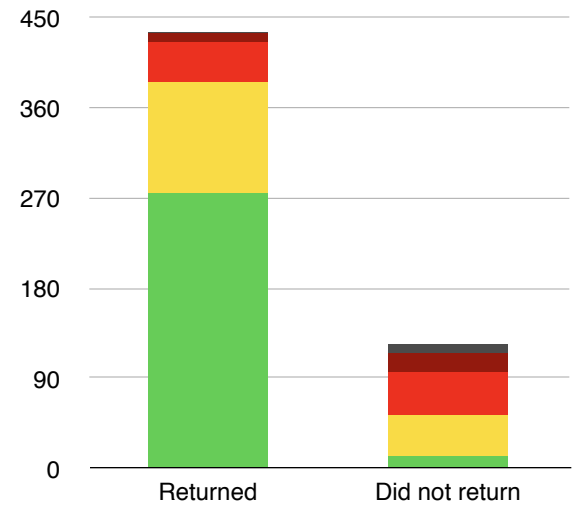
Source: 2011 StatPak

122 of 551 freshmen from the 20th day in 2011 did not return for the 20th day in 2012.

The MAP-Works data summarized in this report includes students who were enrolled prior to (or following) the 20th day in 2011. For that reason, the data includes information about 124 of 559 freshmen from 2011 who did not return in 2012

How well did EBI MAP-Works identify at-risk students?

Risk Indicator	Returned	Did not return
Green	274 (96%)	12 (4%)
Yellow	111 (73%)	41 (27%)
Red	40 (48%)	43 (52%)
Red (x2)	9 (32%)	19 (68%)
Insufficient data	1 (10%)	9 (90%)
Total	435 (78%)	124 (22%)

68% of freshmen identified as extremely high risk (red x2) did not return in 2012. Only 4% of freshmen identified as low risk (green) did not return in 2012.

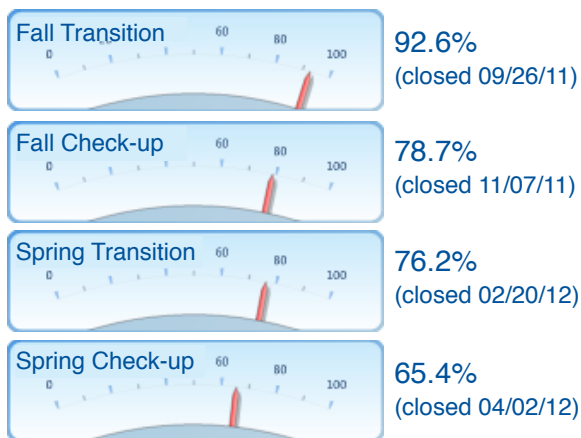50% of students who did not return were identified as high risk. Only 11% of students who returned were identified as high risk.

MAP-Works usage

Student response rates

Fall Transition — **92.6%** (closed 09/26/11)

Fall Check-up — **78.7%** (closed 11/07/11)

Spring Transition — **76.2%** (closed 02/20/12)

Spring Check-up — **65.4%** (closed 04/02/12)

Source: MAP-Works Administrative Page

Faculty / Staff Usage (8/24/11 – 6/30/12)

58 faculty and staff logged-on to MAP-Works in 2011-12

1042 total days in which faculty and staff were logged-in

49 student referrals made by faculty and staff

238 students with interactivity

Source: MAP-Works Faculty/Staff Usage Report

Students who accessed MAP-Works reports

52% of students accessed at least one report (297 students total)

17-30% of students accessed pdf or video reports for each survey

55% of students identified as low-risk accessed at least one report

39% of students identified as high-risk accessed at least one report

Source: MAP-Works Persistence/Retention Report

During our pilot year, St. Ambrose University was awarded the **MAP-Works Excellence Award for Marketing of MAP-Works, Small Campus**.

How are referrals related to student risk?

51% of referrals were made for students identified as high-risk

18% of students identified as high-risk were given a referral

5% of students identified as low- or mid-risk were given a referral

2.11 GPA of students with referrals (compared to 2.69 GPA for all)

Source: MAP-Works Persistence/Retention Report

Interaction contacts*

1110 total interaction contacts with students in 2011-12

37% to 51% of students had at least one interaction contact with: Office for Commuter Services, NSS: FYE, Athletics, Academic Advisor, Residence Life

* in-person meetings, phone conversations, email/ voicemail/written/oral communication from student, message from social networking site

Faculty/Staff Activity Indicators

42 students received at least one of the 49 referrals made by faculty and staff

1.4 average number of faculty, staff, or offices assigned to a referral

47% of referrals were closed

64% of faculty and staff with MAP-Works access had at least one page view

Source: MAP-Works Persistence/Retention Report

The following tables display the percentage of 2011 freshmen not returning in 2012 for various subgroups. The subgroups are ordered from worst to best retention rates.

Subgroup (with 10+ freshmen)	# of students in 2011	% not returning in 2012
MAP-Works insufficient data indicator	10	90.0
Male, non-athlete, off-campus	45	82.2
Male, off-campus	48	79.2
Off-campus	92	71.7
MAP-Works high-risk (redx2) indicator	28	67.9
Female, non-athlete, off-campus	42	66.7
Female, off-campus	44	63.6
Male, African-American	19	57.9
Male, White, ACT<21, HSgpa<2.5	19	52.6
MAP-Works high-risk (red) indicator	83	51.8
Male, African-Amer, ACT<21	12	50.0
African-American	24	45.8
Male, HSgpa<2.5	55	40.0
Male, White, HSGPA<2.5	41	39.0
Female, Hispanic	13	38.5
African-American, ACT<21	16	37.5
Male non-athletes	159	36.5
HSgpa<2.5	83	34.9
Male, White, ACT 21-24, HSgpa>3.5	18	33.3
Female, White, ACT<21, HS 2.5-3.5	49	32.7
Male, White, ACT>24, HSgpa 2.5-3.5	22	31.8
Male, White, ACT 21-24, HSgpa<2.5	19	31.6
Racial minority (non-White)	73	31.5
Male, ACT<21	80	31.3
Male, White, ACT<21	55	30.9
Male, white, on-campus, low ACT/HS	13	30.7
Male, ACT 21-24	105	30.5
ACT < 21	162	29.6
Hispanic, ACT<21	17	29.4
White, ACT<21	124	29.0

Subgroup (with 10+ freshmen)	# of students in 2011	% not returning in 2012
Male, White, ACT 21-24	91	28.6
Female, ACT<21	82	28.0
Males	252	27.8
Non-Athletes	393	27.5
Female, White, ACT<21	69	27.5
MAP-Works mid-risk (yellow) indicator	152	27.0
Hispanic	30	26.7
Male, HSgpa 2.5-3.5	136	26.5
Male, White	208	26.4
Male, White, ACT 21-24, HS 2.5-3.5	53	26.4
Male, no dependents	186	25.3
Female, HSgpa<2.5	28	25.0
Female, White, HSGPA<2.5	24	25.0
Male, dependents	52	25.0
Male, White, HSGPA 2.5-3.5	109	24.8
HSgpa 2.5-3.5	280	24.6
Football players	37	24.3
Freshmen with dependents	117	23.9
ACT 21-24	216	23.2
Female, White, ACT<21, HSgpa<2.5	13	23.1
Female, dependents	65	23.1
Female, HSgpa 2.5-3.5	144	22.9
Female, White, HSGPA 2.5-3.5	129	22.5
All SAU Freshmen	559	22.2
White, ACT 21-24	193	21.8
Female non-athletes	243	21.4
Male, ACT>24	61	21.3
Male, White, HSGPA>3.5	52	21.2
White, Non-Hispanic	486	20.7
Male, White, ACT>24	58	20.7
Two or more races	10	20.0
Male, HSgpa>3.5	55	20.0
Male, Hispanic, HSgpa<2.5	15	20.0
Female, white, on-campus low ACT/HS	50	20.0
Freshmen without dependents	418	19.4

Subgroup (with 10+ freshmen)	# of students in 2011	% not returning in 2012
Male, White, ACT<21, HSgpa 2.5-3.5	32	18.8
Male, non-athlete, on-campus	114	18.4
Male, Hispanic, ACT<21	11	18.2
Male, white, on-campus, mid ACT/HS	44	18.2
Females	307	17.6
Male, Hispanic	17	17.6
Female, White, mid ACT, mid HSgpa	57	17.5
Female, White	278	16.5
Female, ACT 21-24	111	16.2
Female, White, ACT 21-24	102	15.7
Male, on-campus	204	15.7
Female, no dependents	232	14.7
ACT >24	170	14.1
HSgpa>3.5	181	13.8
White, ACT>24	163	13.5
Male, White, ACT>24, HSgpa>3.5	31	12.9
Male athletes	93	12.9
Female, White, ACT 21-24, HS>3.5	32	12.5
On-campus	467	12.4
Female, non-athlete, on-campus	192	11.5
Female, HSgpa>3.5	126	11.1
Female, ACT>24	109	10.1
Female, on-campus	263	9.9
Athletes	166	9.6
Female, White, ACT>24	105	9.5
Female, White, HSGPA>3.5	117	9.4
Female, White, ACT>24, HS 2.5-3.5	22	9.1
Female, white, on-campus mid ACT/HS	77	9.1
Female, White, ACT>24, HS>3.5	79	8.9
Female, white, on-campus	242	8.7
Female athletes	73	5.5
MAP-Works low-risk (green) indicator	**286**	**4.2**
Female, white, on-campus high ACT/HS	73	2.7
Male, white, on-campus, high ACT/HS	26	0.0

Note: From the tables, it looks as though the following characteristics are associated with a higher risk of not returning:

- Living off-campus
- Gender (males are at a higher-risk)
- Academic preparation (low ACT scores or HS GPA)

Using a logistic regression analysis, the following predicted probabilities of student retention were estimated:
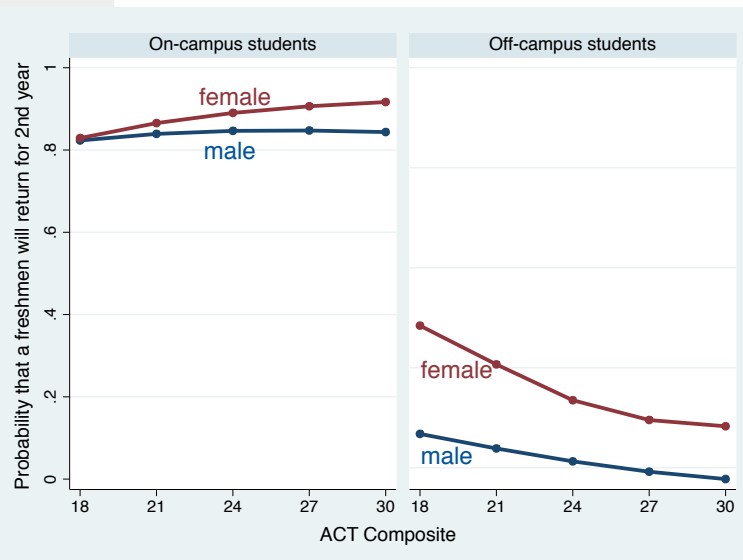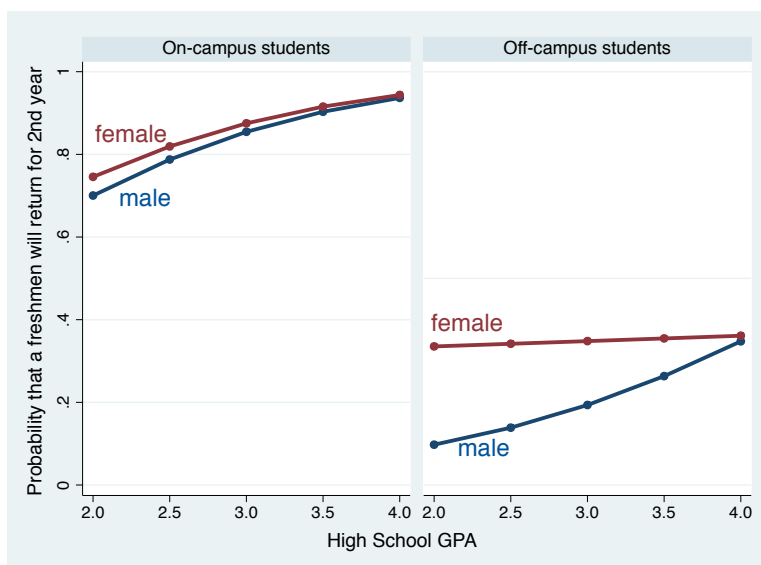

As expected, off-campus students, males in particular, have a much lower predicted retention rate.
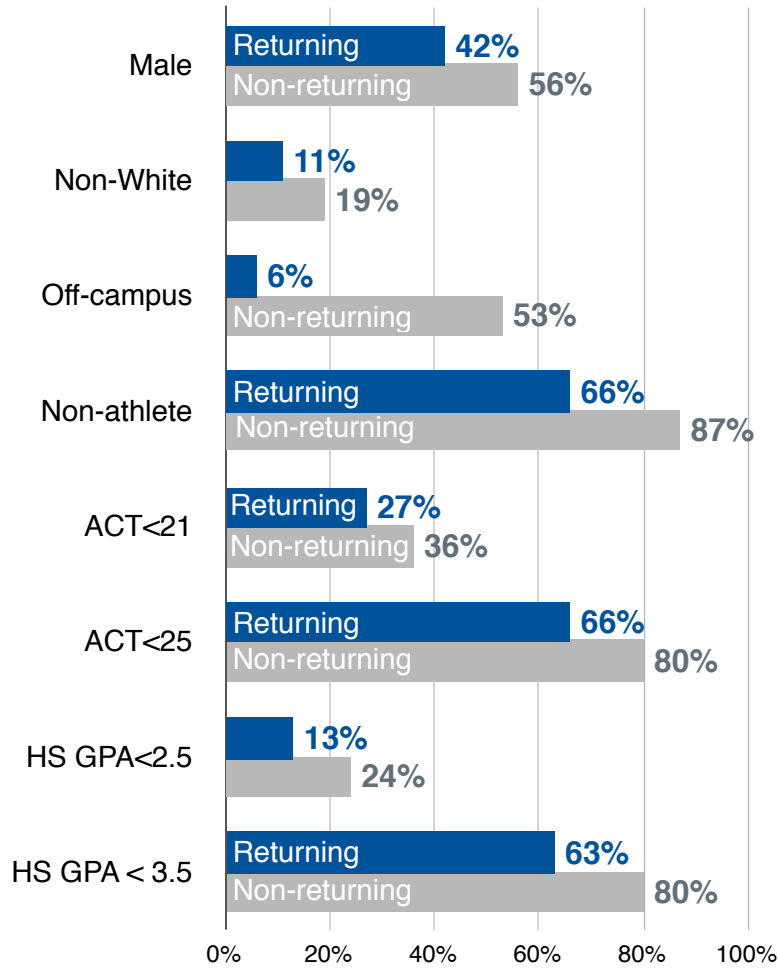
Unexpectedly, off-campus students with higher ACT scores are predicted to have lower retention rates.

Here again, off-campus, male students are predicted to have lower retention rates.

Students with higher high school GPAs are predicted to have higher retention rates.

Demographics of Returning and Non-Returning Students

Male
- Returning **42%**
- Non-returning **56%**

Non-White
- **11%**
- **19%**

Off-campus
- **6%**
- Non-returning **53%**

Non-athlete
- Returning **66%**
- Non-returning **87%**

ACT<21
- Returning **27%**
- Non-returning **36%**

ACT<25
- Returning **66%**
- Non-returning **80%**

HS GPA<2.5
- **13%**
- **24%**

HS GPA < 3.5
- Returning **63%**
- Non-returning **80%**

Non-returning students more likely male, non-white, non-athletes, living off-campus, with lower levels of academic preparation.

Averages	Returning Students	Non-returning Students
Fall semester GPA	2.84	2.19
Fall semester credits	14.31	11.03
Spring semester GPA	2.99	2.37
Spring semester credits	14.67	6.11

Academic Preparation of Returning and Non-Returning Students

Average ACT Composite = 23.0
Average ACT Composite = 21.6

Average High School GPA = 3.24
Average High School GPA = 2.93

Average ACT English = 23.1
Average ACT English = 21.6

Average ACT Math = 22.5
Average ACT Math = 20.7

Average ACT Reading = 23.5
Average ACT Reading = 21.8

Average ACT Science = 23,1
Average ACT Science = 22.2
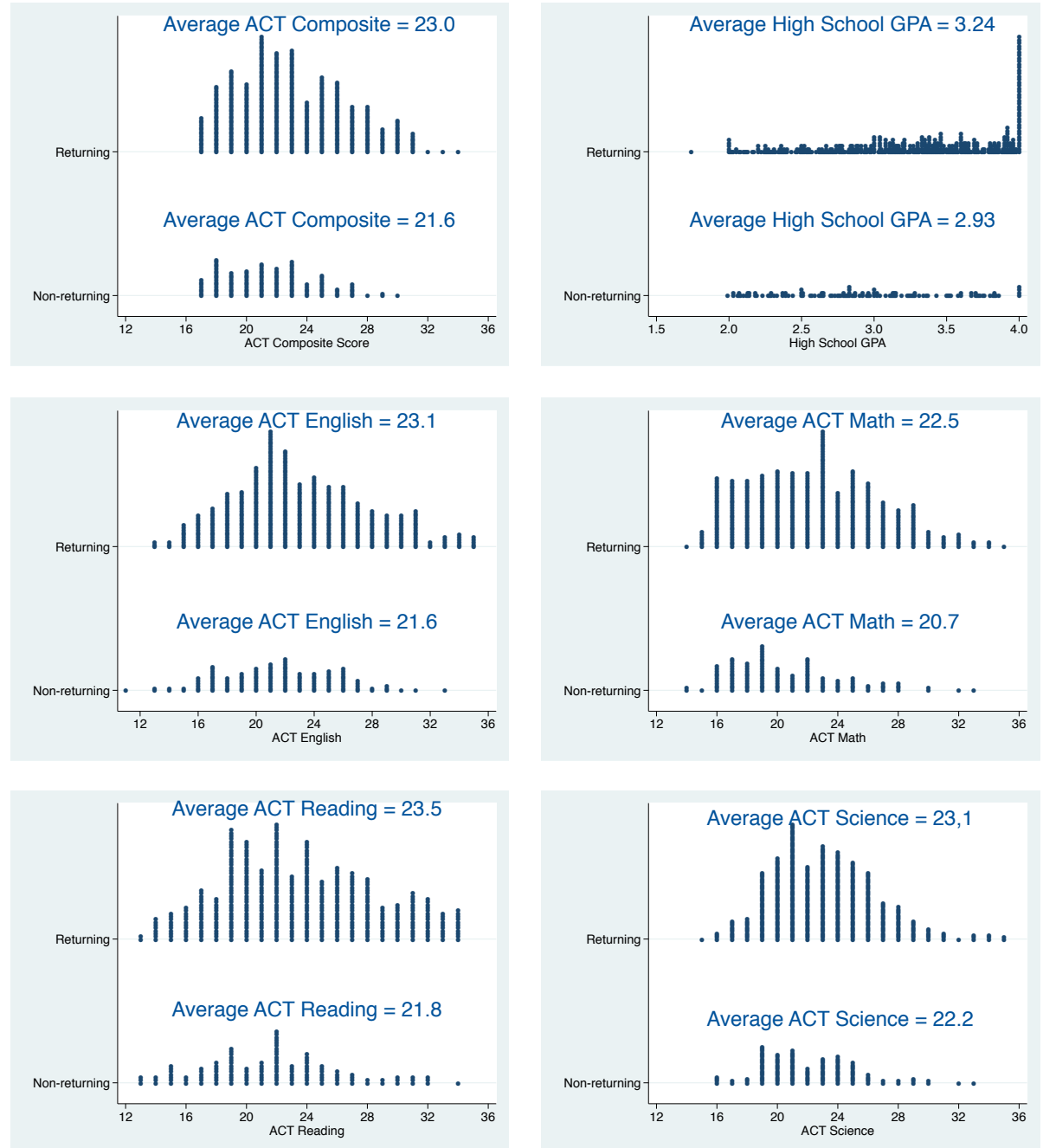
MAP-Works Factor Scores: Returning Students vs. Non-returning

Commitment to Institution

Returning

Non-returning

y-axis: 7, 6, 5, 5, 4, 3, 2
x-axis: 9/11, 11/11, 02/12, 04/12

Communication Skills

Returning
Non-returning

x-axis: 9/11, 11/11, 02/12, 04/12

Analytical Skills

Returning
Non-returning

x-axis: 9/11, 11/11, 02/12, 04/12

Self-Discipline

Returning
Non-returning

x-axis: 9/11, 11/11, 02/12, 04/12

Time Management

Returning

Non-returning

x-axis: 9/11, 11/11, 02/12, 04/12

Financial Means

Returning

Non-returning

y-axis: 7, 6, 6, 5, 4, 3, 3, 2
x-axis: 9/11, 11/11, 02/12, 04/12

Basic Academic Behaviors

Returning

Non-returning

x-axis: 9/11, 11/11, 02/12, 04/12

Advanced Academic Behav.

Returning

Non-returning

x-axis: 9/11, 11/11, 02/12, 04/12

Academic Self-efficacy

Returning

Non-returning

x-axis: 9/11, 11/11, 02/12, 04/12

Peer Connections

Returning

Non-returning

x-axis: 9/11, 11/11, 02/12, 04/12

Homesick: Separation

Returning

Non-returning

y-axis: 7, 6, 5, 4, 4, 3, 2, 1
x-axis: 9/11, 11/11, 02/12, 04/12

Homesick: Distressed

Returning

Non-returning

x-axis: 9/11, 11/11, 02/12, 04/12

Academic Integration

Returning

Non-returning

x-axis: 9/11, 11/11, 02/12, 04/12

Social Integration

Returning

Non-returning

x-axis: 9/11, 11/11, 02/12, 04/12

Satisfaction with SAU

Returning

Non-returning

x-axis: 9/11, 11/11, 02/12, 04/12

On-campus: Social

Returning

Non-returning

y-axis: 7, 6, 5, 4, 4, 3, 2, 1
x-axis: 9/11, 11/11, 02/12, 04/12

On-campus: Environ.

Returning

Non-returning

x-axis: 9/11, 11/11, 02/12, 04/12

On-campus: Roommate

Returning

Non-returning

x-axis: 9/11, 11/11, 02/12, 04/12

Off-campus: Environ.

small sample size

Test Anxiety

Returning

Non-returning

x-axis: 9/11, 11/11, 02/12, 04/12

Retention by Major

Major (with 10+ freshmen)	# of students in 2011	% not returning in 2012
Forensic Psychology	14	43
Undeclared	**65**	**37**
Computer Science Department	15	33
Marketing	12	33
Accounting	13	31
Psychology	60	25
All other majors	**99**	**22**
Industrial & Mechanical Engineering	14	21
Nursing	46	20
Sports Management	11	18
Biology	31	16
Exercise Science	80	16
Criminal Justice	34	15
Management	14	14
General Business	17	12
Early Childhood & Elementary Educ.	34	9

Commitment to Institution

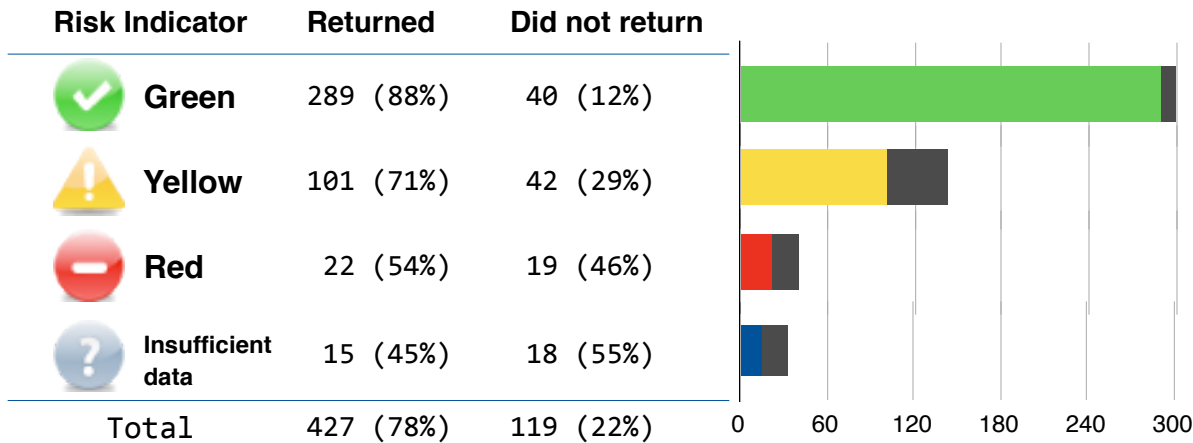Predicted retention rate for undeclared vs declared majors
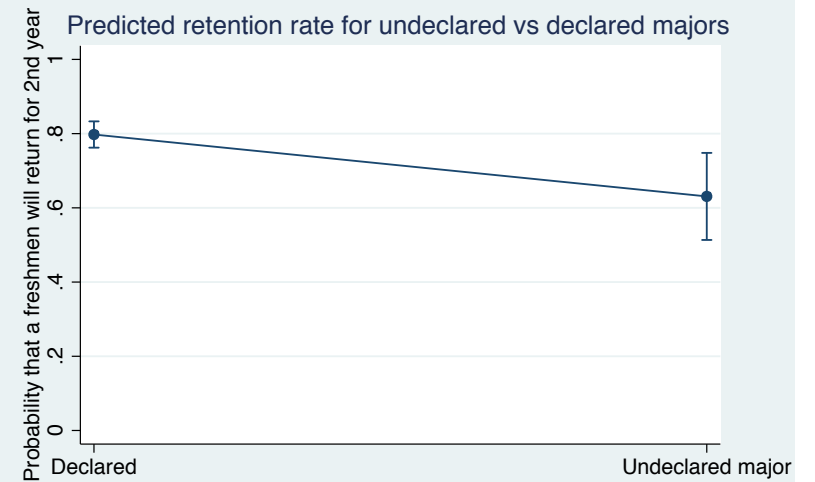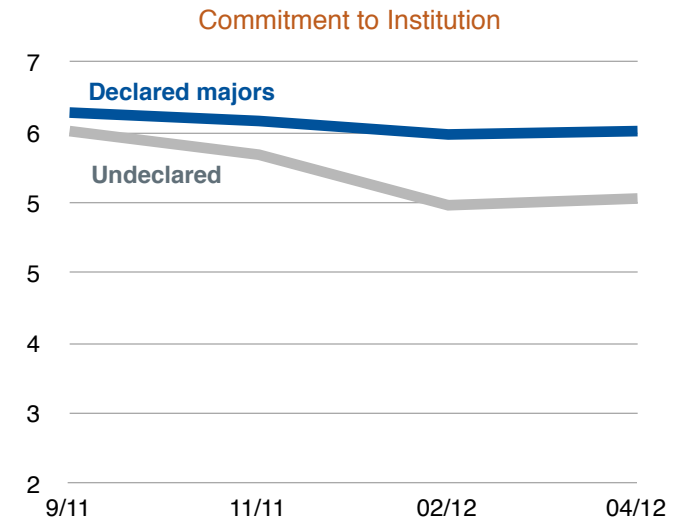
Undeclared majors have less commitment to the institution and are almost twice as likely to not return.

Predicting retention from the Fall Transition Survey

Assuming results from the 2011-12 MAP-Works surveys generalize to the future, is there any way we could predict retention rates (or identify students at-risk of dropping out) as early as the end of September?

Fall Transition Survey Risk Indicators

Risk Indicator		Returned	Did not return
✅	Green	289 (88%)	40 (12%)
⚠️	Yellow	101 (71%)	42 (29%)
⛔	Red	22 (54%)	19 (46%)
❓	Insufficient data	15 (45%)	18 (55%)
	Total	427 (78%)	119 (22%)

Based on their responses to the Fall Transition survey, each student is given a risk indicator.

As early as September, it looks as though the risk indicators provide a useful prediction of student retention. Nearly half of all students who are either high-risk or who have insufficient data did not return in 2012.

What factors, as early as the end of September, contribute to the prediction of retention rates?

A logistic regression analysis predicting retention as a function of demographics and Fall Transition survey results found two factors predict retention: student residence and institutional commitment.
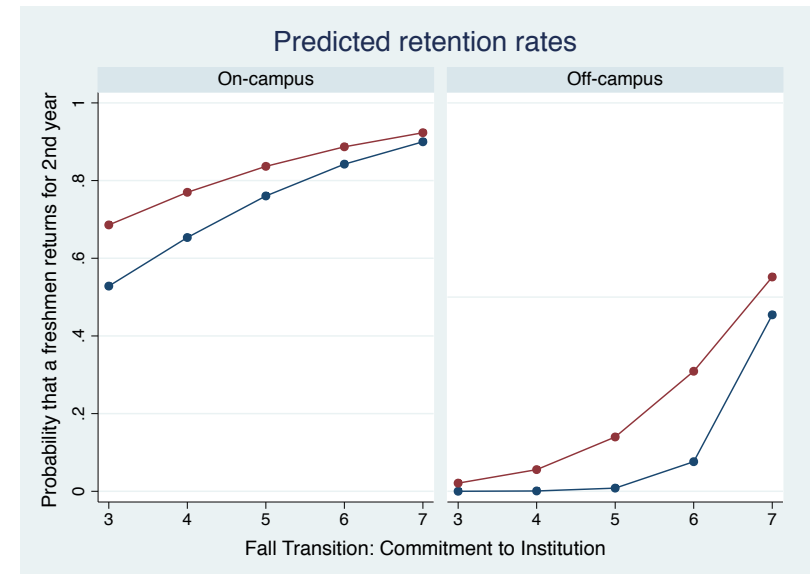
Residence was the best predictor of retention. In fact, 2011 freshmen living **off-campus** were 4 times more likely to NOT return in 2012. Student commitment to SAU (as measured by MAP-Works) was the next most potent predictor of retention.

The graph on the right displays the predicted retention rates for students based on their gender, residence, and commitment scores. If our goal was to get retention at or above 80%, then we would want to focus on:
- On-campus students who score 5 or below on institutional commitment
- All off-campus students

The graph also displays predictions separately for females (red lines) and males (blue lines), but gender was not found to be a statistically significant predictor of retention.

The only other factor from the Fall Transition survey that helped predict retention was Academic Self-Efficacy. Surprisingly, students who scored higher on that factor were more likely to not return this year

Predicted retention rates

On-campus | Off-campus

Probability that a freshmen returns for 2nd year

Fall Transition: Commitment to Institution

Predicting retention from the Fall Transition Survey (continued)

The logistic regression analysis described on the last page yielded these results:

```
Logistic regression                                Number of obs   =        504
                                                   LR chi2(4)      =     131.95
                                                   Prob > chi2     =     0.0000
Log likelihood = -183.71196                        Pseudo R2       =     0.2642


---------------------------------------------------------------------------------
s1_p43falltofallretention |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
--------------------------+------------------------------------------------------
        Living off-campus |   -2.857526   .3286569   -8.69   0.000    -3.501682   -2.213371
                   Female |    .4100209   .2722924    1.51   0.132    -.1236624    .9437042
 Factor1 Commitment to SAU |   .6157054   .1322336    4.66   0.000     .3565322    .8748786
    Factor9 Self-efficacy |   -.2720936   .1375213   -1.98   0.048    -.5416304   -.0025568
                 Constant |   -.6297101   1.042508   -0.60   0.546    -2.672989    1.413569
```

If we could have used this model at the end of September 2011, it would have allowed us to predict the probability that each freshmen would return in 2012. For example, we could predict:

> A male student living off-campus with a commitment score of 5 and a self-efficacy score of 6 has an 11% chance of returning
> A female student living on-campus with a commitment score of 6 and a self-efficacy score of 4 has a 92% chance of returning

Suppose we would have then classified students based on our predictions. Any student predicted to have less than a 50% chance of returning would be classified as a predicted drop-out. Students predicted to have a greater than 50% chance of returning would be classified as predicted returners.

How accurate would these classifications have been if we would have made them in late September last year? The following table shows that we would have correctly classified 86.5% of students:

	Student did return in 2012	Student did NOT return in 2012	Total
Predicted returner	389	52	441
Predicted dropout	16	47	63
Total	405	99	504

Of 504 freshmen in 2011, we would have accurately predicted the retention of 86.5% (389 + 47 = 436 students).

Of the 99 students who did not return (and who had data to contribute to this analysis), we would have accurately predicted 47 to drop out (47.5%).

Of the 405 students who did return, we would have incorrectly predicted 16 (4%) to have dropped out.