

Which students respond to the surveys you send them?

Using online panels to track student survey response over an academic year

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Presentation Overview

- Background
- Literature
- Research Questions
- Methods
- Results
- Limitations
- Lessons Learned
- Discussion

Background

- Low response rates to student surveys
- Little research into patterns of response to multiple or successive student surveys – only single survey administrations
- Important to examine student response to multiple surveys

Literature

- Variety of factors are predictive of response
 - Gender: female students more likely to respond
 - Race: White students more likely to respond
 - Academic achievement: high achieving students more likely to respond
- Inconsistent factors
 - Financial aid
 - Foreign students
 - Asian students

Research Questions

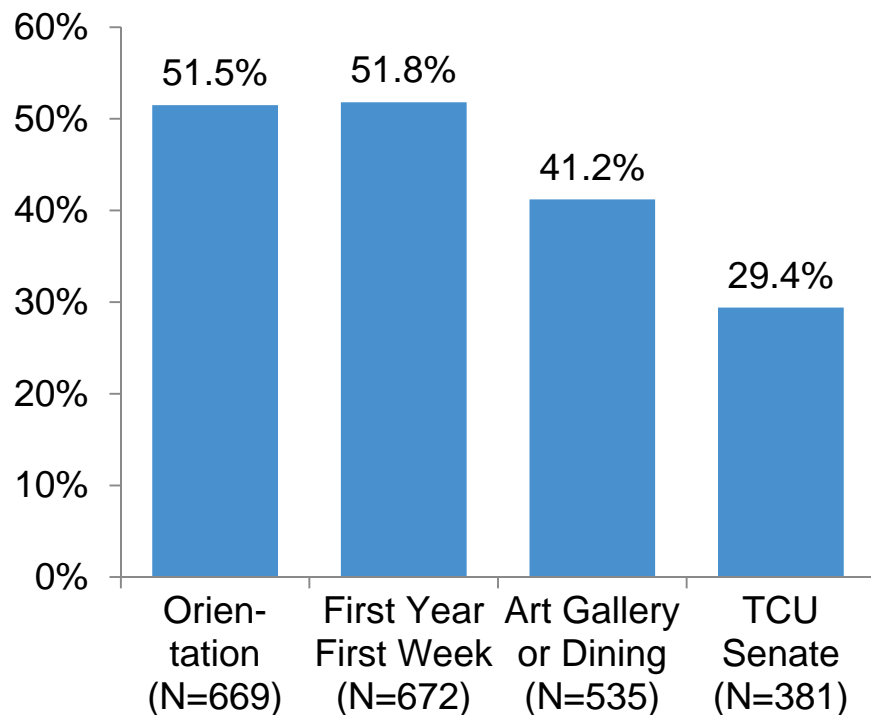
1. Are all students equally likely to respond to successive surveys, or are there patterns of response based on student characteristics such as demographics, academics, etc.?
2. What student characteristics predict response to a given survey, and are these consistent across successive surveys?

Data

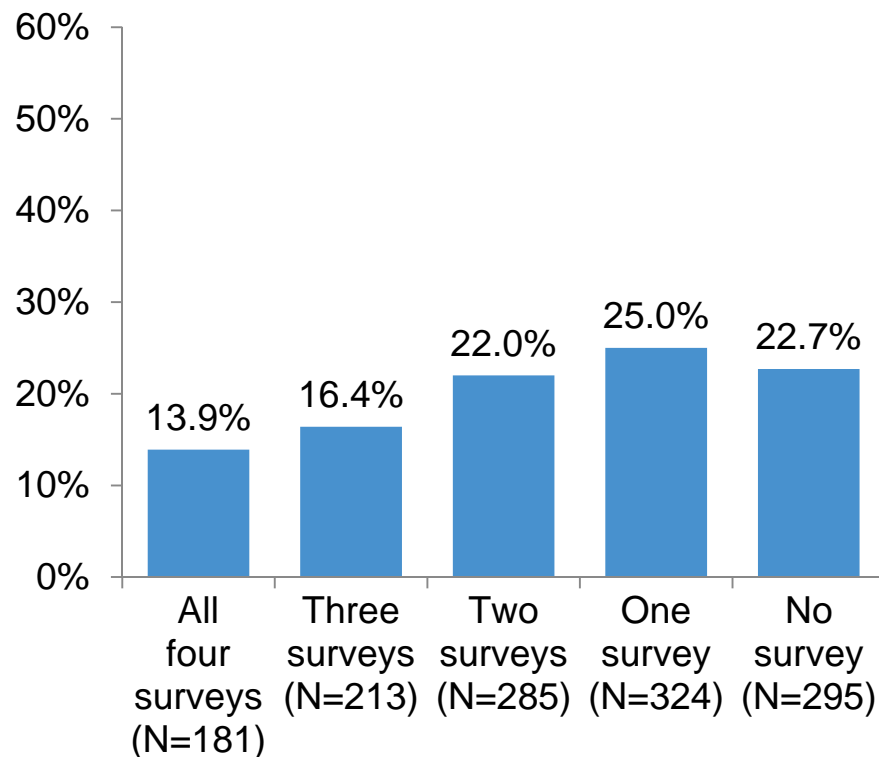
- Survey Response data from Qualtrics panels
 - Fall 2012 survey response data from 1,298 first-year students
 - Five surveys administered between September and December
- Student background and demographic characteristics from university's Student Information System
 - Linked with student ID to response pattern data
 - Demographics and background characteristics
 - Admissions characteristics
 - First-semester academics
 - Dorm

Outcome Measures

Survey response rates



Overall number of surveys taken



Analysis

- **Bivariate Analyses**
 - Cramer's V and Spearman's rank correlation coefficient
 - Test for relationship between potential predictors and survey response
- **Multivariate Analyses**
 - Logistic Regressions in two stages
 - Predicting response to each individual survey
 - Multinomial Logistic Regression
 - Predicting overall number of surveys responded to

Results: Bivariate Analyses – Cramer's V

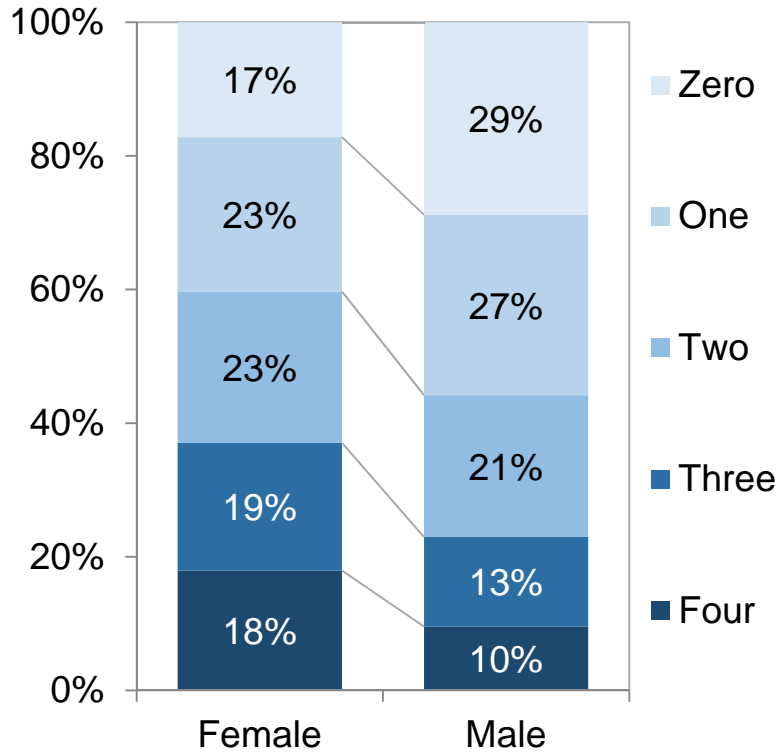
Relationship between categorical variables and survey response

	Orientation	FYFW	AG/Dining	Senate	Overall
<i>Gender</i>	.156*	.080*	.134*	.140*	.185*
<i>Race</i>	.098*	.072	.036	.120*	.136*
<i>Applied for Aid</i>	.075*	.070*	.045	.103*	.135*
<i>Dean's List</i>	.072*	.110*	.095*	.084*	.133*
<i>Dormitory</i>	.118	.111	.084	.128*	.115*
<i>Early Decision</i>	.047	.048	.047	.025	.098*
<i>High School Region</i>	.109	.082	.083	.100	.086
<i>English as home language</i>	.004	.020	.031	.082	.082
<i>Awarded Aid</i>	.008	.024	.010	.015	.080
<i>Scholarship recipient</i>	.061*	.042	.027	.040	.074
<i>First Generation Status</i>	.057*	.025	.034	.001	.073
<i>English is primary language</i>	.018	.011	.004	.059*	.070
<i>Type of HS</i>	.015	.031	.032	.044	.063
<i>Parent alumni status</i>	.018	.027	.049	.021	.044
<i>Legacy Status</i>	.042	.001	.016	.026	.035
<i>Academic Action</i>	.001	.011	.010	.039	.026

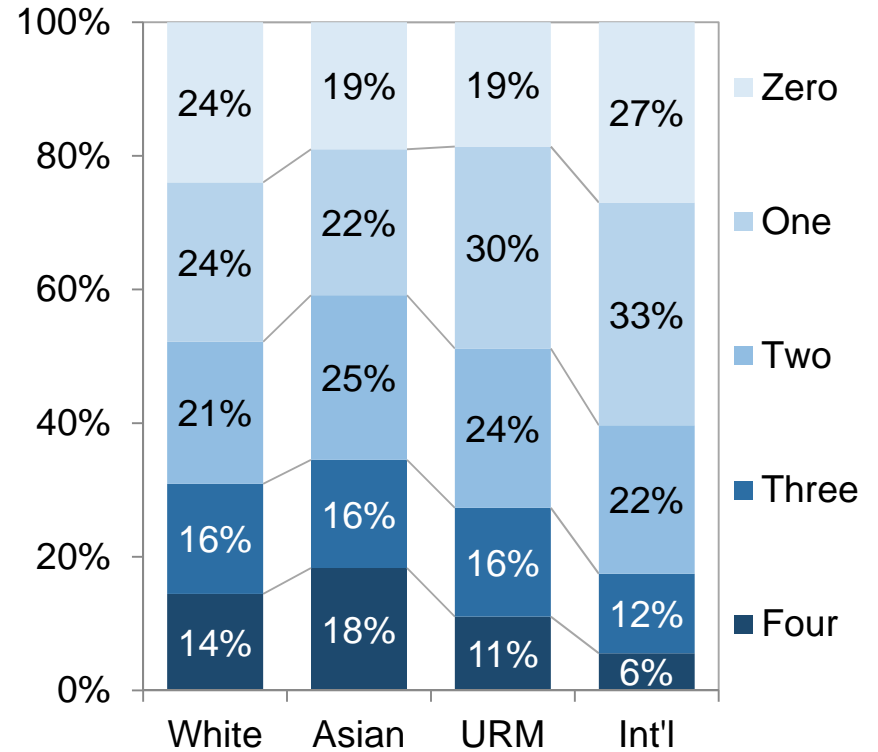
*Significant at $p < .05$

Overall Response Patterns by Gender and Race

Overall number of surveys taken by gender

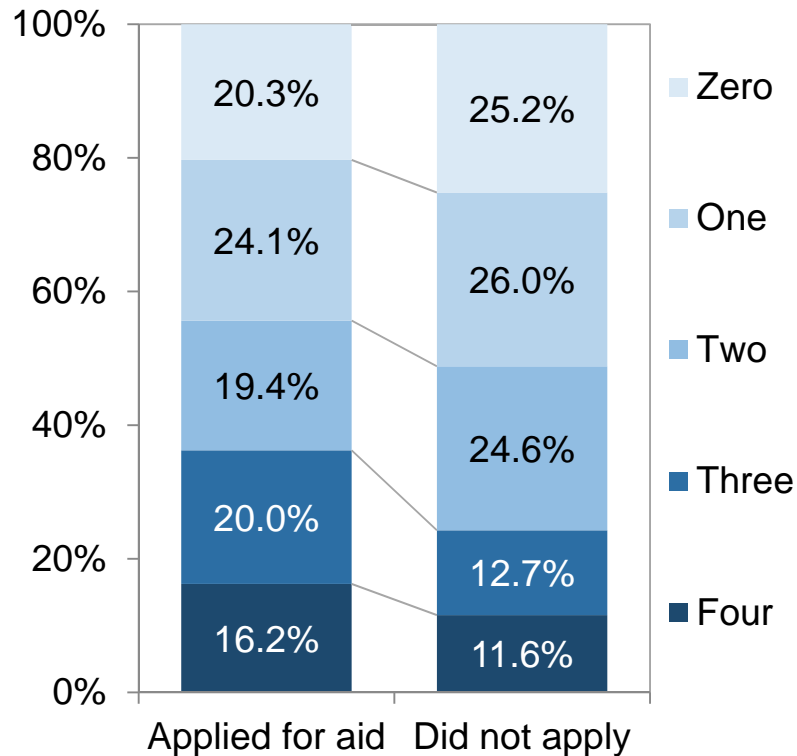


Overall number of surveys taken by race/ethnicity

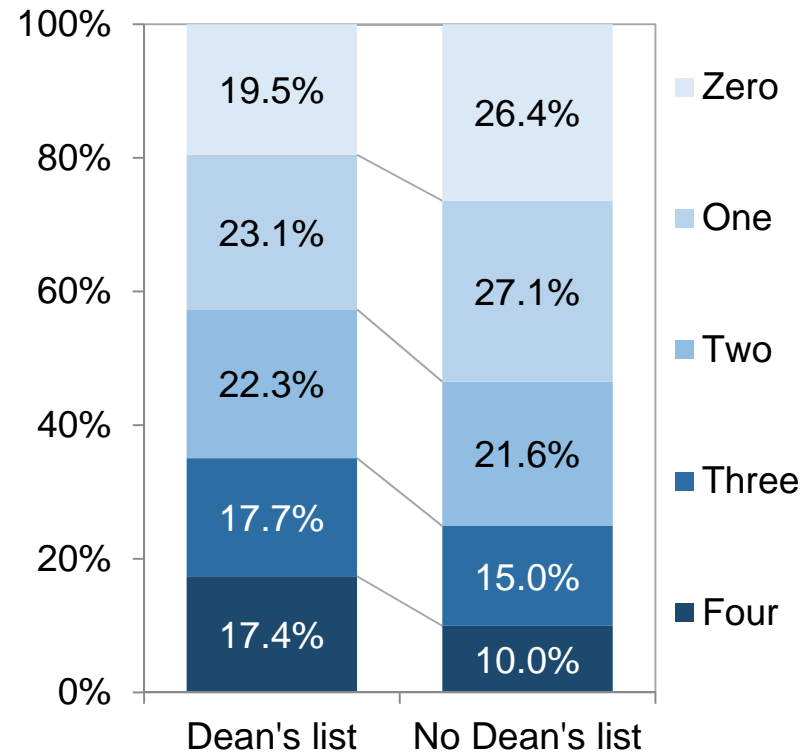


Overall Response Patterns by Financial Aid, Dean's list

Overall number of surveys taken by financial aid application status



Overall number of surveys taken by Dean's list (first semester)

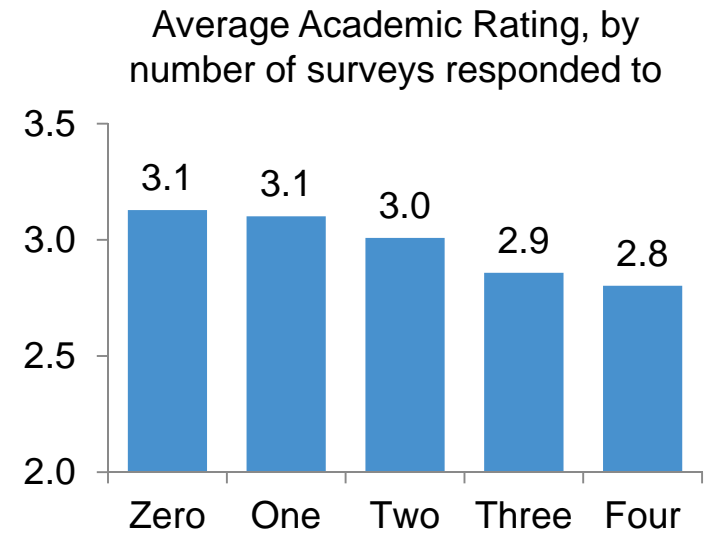
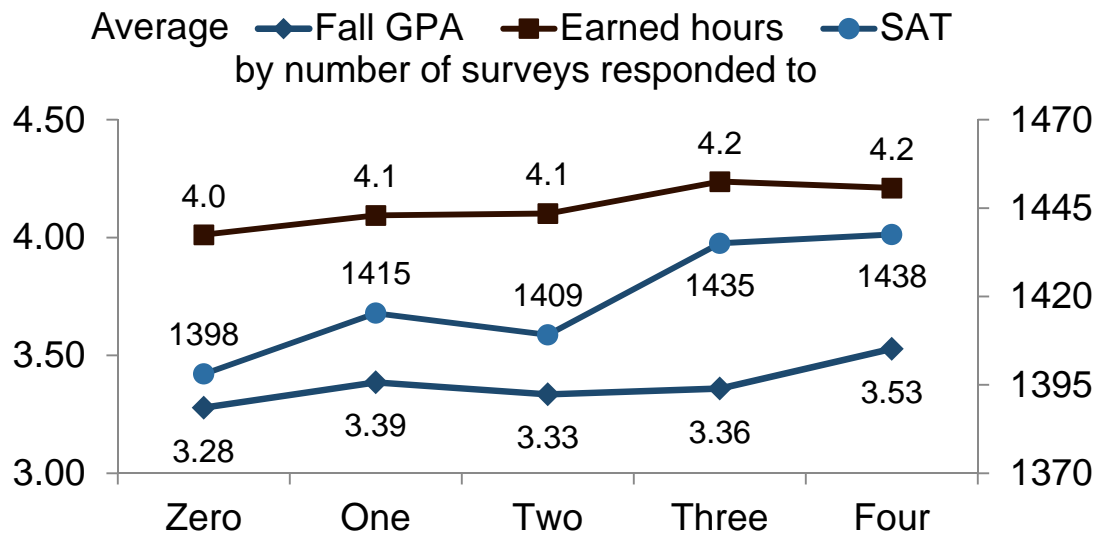


Results: Bivariate Analyses – Spearman's ρ

Relationship between continuous variables and survey response

	Orientation	FYFW	AG/Dining	Senate	Overall
<i>Average Academic Rating</i>	.100*	.089*	.090*	.088*	.144*
<i>Fall semester GPA</i>	.101*	.122*	.102*	.098	.147*
<i>Earned hours</i>	.069*	.090*	.078*	.094*	.135*
<i>SAT/ACT</i>	.087*	.111*	.073*	.102*	.131*
<i>Average Reader Rating</i>	.054	.015	.023	.001	.019

*Significant at $p < .05$



Results: Logistic Regression I

Results of forward stepwise regression

Significant predictors

	Orientation	FYFW	AG or Dining	Senate
Gender	x	x	x	x
Race	x	x		x
Applied for Aid		x	x	x
Dean's List		x	x	
First Generation Status	x			
English is primary language	x	x		
Average Academic Rating	x	x	x	
Fall semester GPA	x			
Earned hours				x
SAT/ACT				x
Dormitory				
Early Decision				
Scholarship recipient				

Results: Logistic Regression II

Results of models with same predictors

Odds ratios for significant predictors

	Orientation	FYFW	AG or Dining	Senate
Gender (Female)	1.80	1.31	1.69	1.86
URM student*				
Asian American*				
Non-resident alien*	0.61	0.66		0.44
Other race/ethnicity*				
Applied for Aid				1.55
Dean's List		1.39	1.38	1.33
First Generation Status	1.62			
Average Academic Rating**	1.36	1.36	1.25	1.23

*White students are reference group

**Average academic rating was reversed for analysis, so that higher scores indicate a better rating

% of cases categorized correctly	Orientation	FYFW	AG or Dining	Senate
Did not take survey	58.9	55.7	56.9	56.2
Responded to survey	61.1	60.2	59.8	65.6
Total	60.0	57.9	58.1	59.0

Results: Multinomial Logistic Regression I

Outcome reference group = zero surveys

Odds ratios for significant predictors

	One Survey	Two Surveys	Three Surveys	Four Surveys
Gender (Female)	1.41	1.68	2.32	3.04
URM student*				
Asian American*				
Non-resident alien*				0.37
Other race/ethnicity*				
Applied for Aid			1.92	1.56
Dean's List				2.07
First Generation Status		2.31		2.57
Average Academic Rating**		1.33	1.67	1.70

*White students are reference group

**Average academic rating was reversed for analysis, so that higher scores indicate a better rating

% of cases categorized correctly	Zero Surveys	One Survey	Two Surveys	Three Surveys	Four Surveys
Overall: 29.1	44.6	34.9	23.6	14.6	19.3

Results: Multinomial Logistic Regression II

Outcome reference group = four surveys

Odds ratios for significant predictors

	Zero Surveys	One Survey	Two Surveys	Three Surveys
Gender (Female)	0.33	0.46	0.55	
URM student*				
Asian American*				
Non-resident alien*	2.71	3.33		
Other race/ethnicity*				
Applied for Aid	0.64		0.54	
Dean's List	0.48	0.57	0.65	
First Generation Status	0.39	0.68		
Average Academic Rating**	0.59	0.67		

*White students are reference group

**Average academic rating was reversed for analysis, so that higher scores indicate a better rating

% of cases categorized correctly	Zero Surveys	One Survey	Two Surveys	Three Surveys	Four Surveys
Overall: 29.1	44.6	34.9	23.6	14.6	19.3

Research Questions - Answered

1. Are all students equally likely to respond to successive surveys, or are there patterns of response based on student characteristics such as demographics, academics, etc.?

- All students are not equally likely to respond to successive surveys

Important variables:

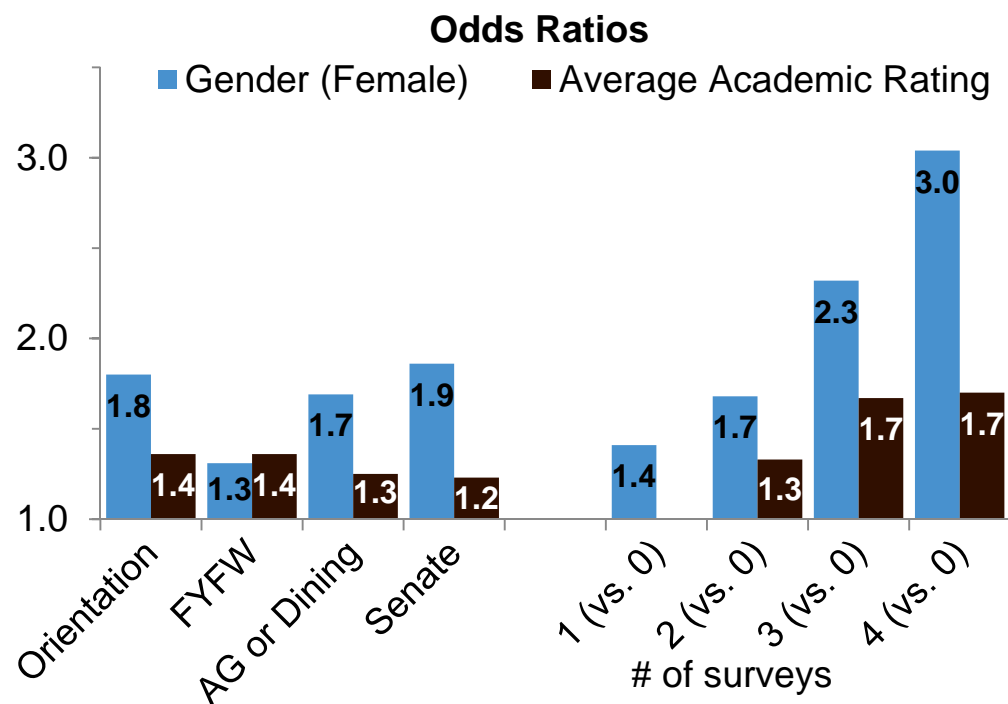
- Gender
- Race
- Applied for Aid
- First Generation Status
- English is primary language
- Average Academic Rating
- Fall semester GPA
- Earned hours
- SAT/ACT
- Dean's List

Research Questions - Answered

2. What student characteristics predict response to a given survey, and are these consistent across successive surveys?

Primary Predictors:

- Gender
- Academic Rating
- Dean's List



Additional Results

- Academic Rating and Dean's List were best indicators of academic achievement in terms of predicting response
- Race (White versus Asian, URM, Other) did not significantly predict response, but Foreign students were less likely to respond than White students
- First generation status: positively predicted response, but not consistently
- Applied for aid showed a significant relationship with survey response, but not received aid
- Very few predictors distinguish between responding to zero and one surveys; no predictors distinguish between responding to three and four

Limitations

- Definition of “response”
- Small sample size
- Survey topics & incentives differed
 - Dining vs. Art Gallery
- Timing not taken into account
- Limited nature of variables in student information system

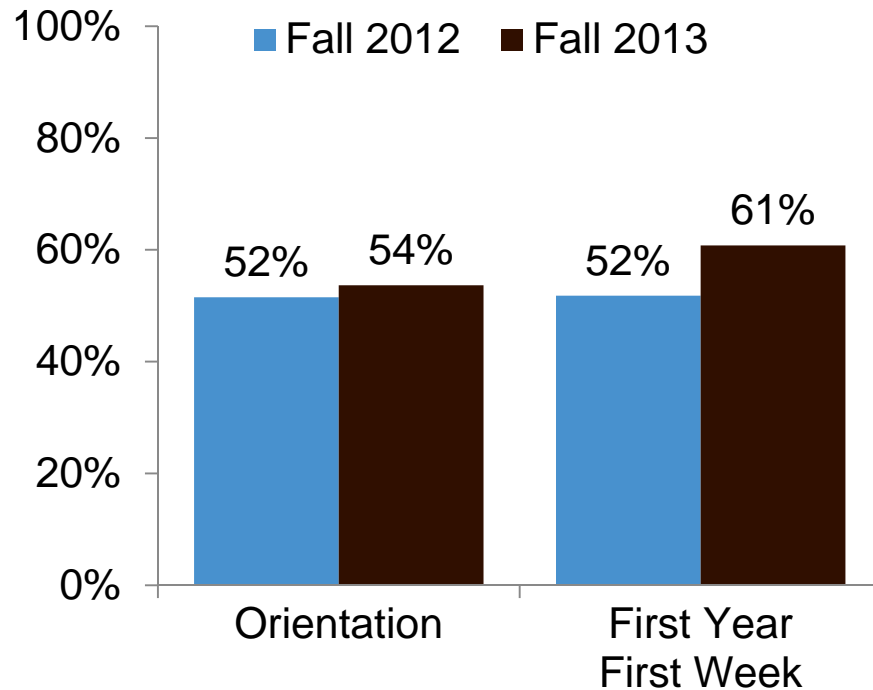
Lessons Learned

- Certain student characteristics are reliably correlated with response
- To reduce bias in respondent samples, not ideal to administer four back-to-back surveys to the same population
 - Females became a larger proportion of respondents as more surveys were administered
 - Sampling may be a good solution

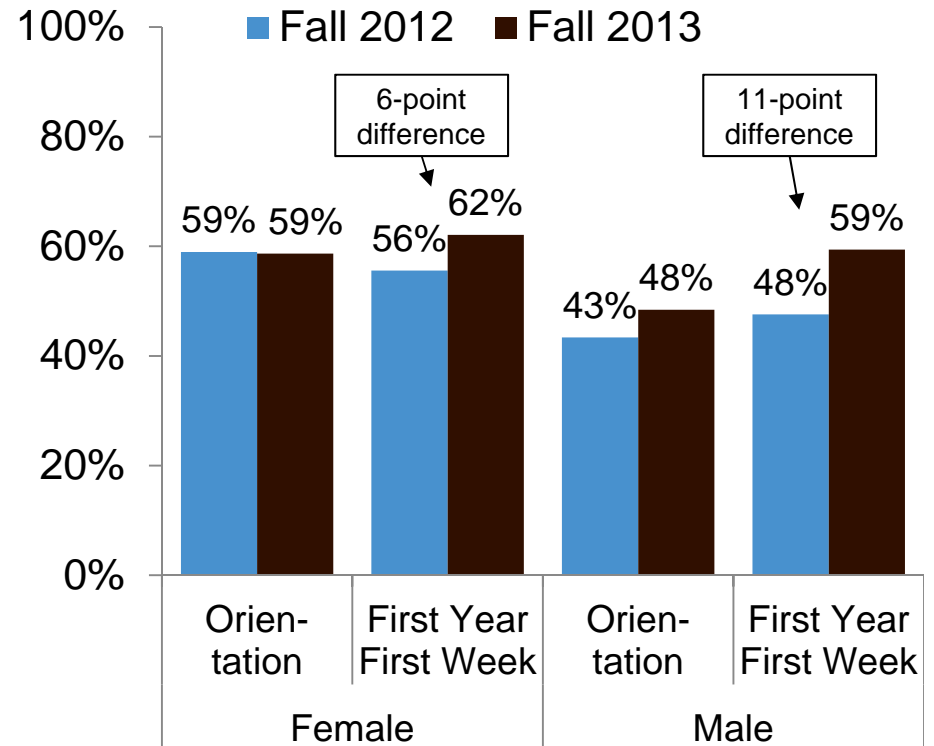
Results of Sampling

First two Surveys given to first-year students

Orientation & First Year First Week Survey response rates, 2012 & 2013



Orientation & First Year First Week Survey response rates by gender, 2012 & 2013



Thank You! Questions?

- Questions, Comments?
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- A copy of this presentation will be uploaded to our website (and to NEAIR's)

<http://provost.tufts.edu/institutionalresearch/>

