Understanding Response Rates in Online Student Evaluation of Teaching Surveys

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Outline

> Student evaluation of teaching and nonresponse bias

> A look at student evaluation of teaching at UCR

> What I learned about response rates

> Takeaways

STUDENT EVALUATIONS OF TEACHING
&
NONRESPONSE BIAS

Student evaluation of teaching

- Is it useful?
- How are the instruments constructed?
- Is it reliable and/or valid?

- There is less work on response rates and response bias

Nonresponse bias

> A common factor is related to likelihood of responding AND factors of interest in the survey

> Reasons for nonresponse include
>> Opportunity cost
>> Social exchange and saliency
>> Survey fatigue

Response is more likely for:

> Paper evaluations in class

Response is more likely for:

> Women

> Those with higher academic achievement

> "Older" students

> A course in a student's major

> MIXED for:
>> Units: Less units more likely
>> Courses: More courses more likely

Who "should" complete evaluations?

- Busier students will be <u>less</u> likely
  - Number of units
  - Athletes
- Students connected to the university will be <u>more</u> likely
  - Cumulative GPA
  - Not first Generation
  - Entered as freshmen
  - May vary by college
- More evaluations will make students <u>less</u> likely

A LOOK AT iEVAL at UCR

iEval

- Homegrown system
  - Campus wide
  - Parallel system for TAs
- End of quarter
- Incentive of early access to course grade

iEval

> Twenty items that ask about:

>> Student engagement (5 Likert items),

>> Instructor's attitude and behavior (8 Likert items),

>> Course materials (5 Likert items),

>> Overall course experience (1 Likert item)

>> Plus one open ended

UNDERSTANDING RESPONSE RATES

Response rate for the campus

Response rate by course size

	Response Rate	Standard Deviation	Courses	Students
Less than 10 students	69.58%	0.199	52	378
11 to 25 students	70.97%	0.137	179	3590
26 to 50 students	73.60%	0.100	102	3829
51 to 100 students	72.15%	0.082	165	12163
101 to 150 students	73.30%	0.074	48	6064
151 to 200 students	75.35%	0.075	18	3124
201 to 250 students	75.42%	0.072	22	4935
More then 251 students	75.53%	0.069	50	18280

Response rate by student

	Percent of Students	Number of Students
0% of evaluations	24.80%	4,158
1-25% of evaluations	0.38%	64
26-50% of evaluations	1.74%	292
51-75% of evaluations	3.73%	624
76-99% of evaluations	0.24%	40
100% of evaluations	69.13%	11,598

The mean number of evaluations per student was 3.18 and the median was 3.

Methods

- Limited final analysis to 15,696 students who had at least two evaluations to fill out

- Used a simple logistic regression to model log odds of completing <u>all</u> or <u>no</u> evaluations

  - Modeling technique matches the problem well, although only models variance at one level

Variables and descriptive stat.s

	Completed all evaluations (n = 11,598)	Completed no evaluations (n = 4,158)
Female	0.58	0.42
	(0.50)	(0.49)
Cum. Units	126.27	119.68
	(53.99)	(55.22)
Athlete	0.01	0.01
	(0.10)	(0.12)
Cum. GPA	2.94	2.70
	(0.49)	(0.54)
First generation student	0.58	0.53
	(0.49)	(0.50)
Native Freshmen	0.86	0.82
	(0.35)	(0.39)
Engin. college	0.12	0.12
	(0.33)	(0.33)
Business college	0.07	0.05
	(0.26)	(0.21)
Science college	0.26	0.22
	(0.44)	(0.41)
Number of evals.	3.23	2.99
	(0.87)	(0.71)

Regression results

Log odds of completing all evaluations			
Female	0.698** (18.84)	0.759** (19.20)	0.752** (18.91)
Cum. Units	0.003** (7.46)	0.001** (1.98)	0.001** (2.75)
Athlete	-0.214 (1.30)	-0.093 (0.55)	0.006 (0.03)
Cum. GPA		0.936** (23.82)	0.895** (22.65)
First generation student		0.276** (7.15)	0.281** (7.24)
Native Freshmen		0.354** (6.45)	0.351** (6.38)
Engin. college		0.408** (6.68)	0.336** (5.42)
Business college		0.491** (5.58)	0.465** (5.25)
Science college		0.422** (8.98)	0.332** (6.92)
Number of evals.			0.315** (13.79)
Constant	0.381** (7.77)	-2.976** (20.48)	-3.850** (24.05)**
N	15,696	15,696	15,696
Pseudo- r^2	0.02	0.07	0.08

TAKEAWAYS

Limitations

- One institution at one point in time
    - One incentive structure
- No graduate students
- Relatively simple modeling strategy

Takeaways

- Students, by and large, complete evaluations or they do not
  - Implications for survey fatigue
- Gender and grades exert the biggest impact on odds of response
  - Grades introduce the possibility of a double bias – both in response and rating

QUESTIONS?