

## Survey Incentives and Institutional Response Rates: An Exploratory Analysis

Shimon Sarraf  
James Cole, Ph.D.

Indiana University Center for Postsecondary Research



## Incentives Research in HE

### Those that found incentives effective

Parsons and Maniere (2013)

- Significant increase in response rate for the experimental group compared to the control (49.4% versus 37.6%, respectively).

Laguilles et al (2011)

- Across four surveys covering different topics, use of lottery-based incentives significantly boosted responses rates between 5% and 9%.

### Those that found incentives were ineffective

Porter and Whitcomb (2003)

- One exp group responded at a significantly higher rate than the control group (16.9% versus 13.9%, respectively). No differences between other exp groups and control. Overall incentives had “minimal impact”

## Background

- For years response rates have been in decline.
- As a result, incentives are increasingly used to boost or hold steady response rates.
- Since 2010, use of incentive at NSSE institutions has increased from 35% (2010) to 54% (2014).
- However, the scant research on the efficacy is mixed with some studies indicating minimal, while others demonstrate that incentives are effective.

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## Theory

### *Social Exchange Theory* (Dillman, 1978)

Three factors

- 1) Reward – what the respondent expect to gain from the survey?
- 2) Cost – how much to obtain the reward?
- 3) Trust – expectation that the reward will outweigh the cost

### *Leverage-Salience Theory* (Groves et al., 2000)

A decision-making theory that considers the “subjective weight” of

- 1) Leverage – importance
- 2) Salience – topic interest
- 3) Survey and invitation attributes

## Theory

*Social Exchange Theory* (Dillman, 1978)

Three factors

- 1) Reward – **incentive type and value**
- 2) Cost – **effort, time**
- 3) Trust – **promotion message; survey attributes**

*Leverage-Salience Theory* (Groves et al., 2000)

A decision-making theory that considers the “subjective weight” of

- 1) Leverage – **incentive type and value**
- 2) Salience – **negative or positive interest**
- 3) Survey and invitation attributes – **sponsorship, design, etc**

## Research Questions

1. Are different lottery incentive types associated with higher NSSE response rates after controlling for institutional characteristics?
2. Does incentive type effectiveness vary by class level (first-year students versus seniors)?
3. Are certain types of incentives more strongly related to institutional response rates than others? Does the amount spent by institutions on incentives matter?
4. What is the relationship between campus promotional efforts and response rates, above and beyond incentives? Does the relationship vary by class level? How do schools promote NSSE (posters, social media) and who is involved?

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## Research Questions

1. Do different types of lottery incentives correlate with higher NSSE response rates after controlling for institutional characteristics?
2. Does the relationship between incentive type and average institutional response rates vary by first-year and senior NSSE administrations?
3. Are certain types of incentives more strongly related to institutional response rates than others? Does the amount spent by institutions on incentives matter?
4. What is the relationship between campus promotional efforts and response rates, above and beyond incentives? Does the relationship vary by class level? How do schools promote NSSE (posters, social media) and who is involved?

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## Original Sample

- National Survey of Student Engagement (NSSE)  
– 2013 administration (n=621)

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## Incentive Types Used (NSSE 2013)

Cash	<b>7%</b>
Gift Card - General	<b>7%</b>
Gift Card - Specific	<b>20%</b>
Technology	<b>13%</b>
Other Incentive	<b>1%</b>

N = 621

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### Incentive Type: Lottery or Guaranteed Prize (NSSE 2013)

	N	%	%
Lottery	269	43	92
Guaranteed	15	2	5
Combination	9	1	3
No incentive	328	53	-
Total	621	100	100

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### Analytical Sample

- 531 out of 621 NSSE 2013 institutions
  - Institutions excluded
    - 1) Used more than one incentive type
    - 2) Used a guaranteed incentive
    - 3) International institutions (Canadians retained)
    - 4) Halted administrations
    - 5) Influential outliers
- NSSE incentive data set (229 institutions)
- Quick Response Panel (230 institutions)

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### How many different types of incentive combinations? (NSSE 2013)

	N	%	%
0	327	53	-
1	256	41	87
2	32	5	11
3	5	1	2
4	1	0	0
Total	621	100	100

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### Key Variables

#### Dependent Variables

#### Institutional Response Rates

- First-Year
- Senior

#### Promotional Effort (1/0)

High  
Medium  
Low (reference)

#### Incentive Type (1/0)

Cash  
Gift Card – General  
Gift Card – Specific  
Technology  
Other (school benefits, souvenirs, and other random approaches)  
*reference: no incentive used*

#### Expenditures

Dollars spent per NSSE sample member

## Measuring Promotional Effort with NSSE Quick Response Panel

Apart from participation incentives, how would you describe your NSSE 2013 promotional activities?

- We did not have any special promotional activities. Students only received our official recruitment messages. [Low]
- We promoted the survey using one or two simple methods (e.g., posters, advertisements) but did not invest much otherwise. [Medium]
- We promoted the survey in many different ways and invested significant effort in getting the word out. [High]

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## Methods

- First-year and senior OLS Regression models
- Natural log of response rate used to address regression assumptions (constant residual variance)
  - Coefficients transformed and interpreted as percentages per log-linear model
  - Note: a 15% coefficient does NOT mean response rate is 15% points greater
- 51% of variation explained for first-year students; 47% for seniors

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## Other Variables

### School Characteristics

Campus Proportion of ...

Full-time students

Female

African-American

Latino

Canadian institution (1/0)

Public institution (1/0)

Undergraduate enrollment  
(000s)

## Results

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### Question #1

Do different types of lottery incentives correlate with higher NSSE response rates after controlling for institutional characteristics?

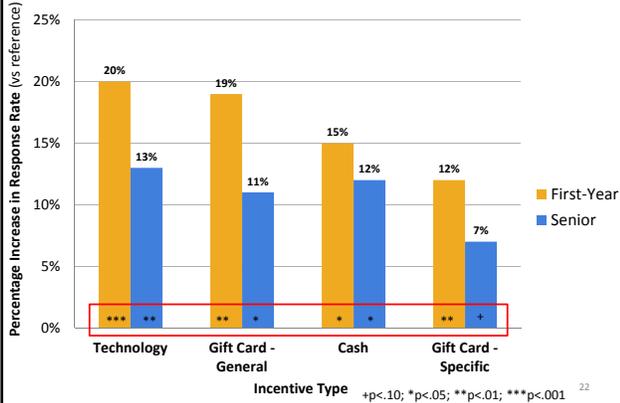
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### Question #2

Does incentive type effectiveness vary by class level (first-year students versus seniors)?

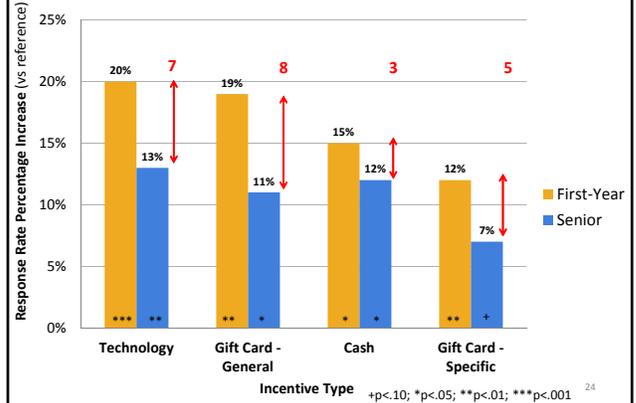
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**Response Rate % Increase by Incentive Type**  
(reference group: no incentive used)



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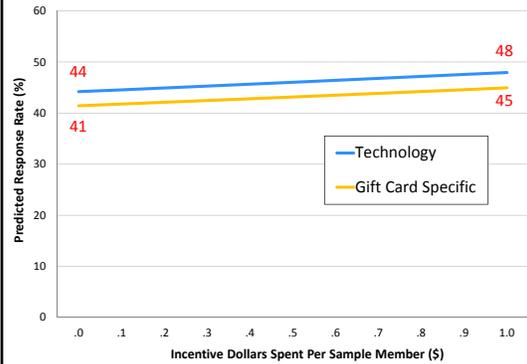
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### Question #3

Are certain types of incentives more effective at increasing response rates than others? Does the amount spent on incentives matter?

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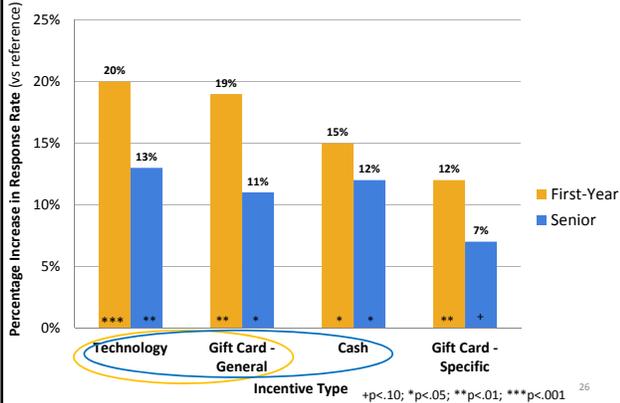
Senior Predicted Response Rates by Dollars Spent Per Sample Member on Technology and Specific Gift Card



Predicted rates assume a US private institution with 1,000 undergrads and high promotion level.

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Response Rate % Increase by Incentive Type (reference group: no incentive used)

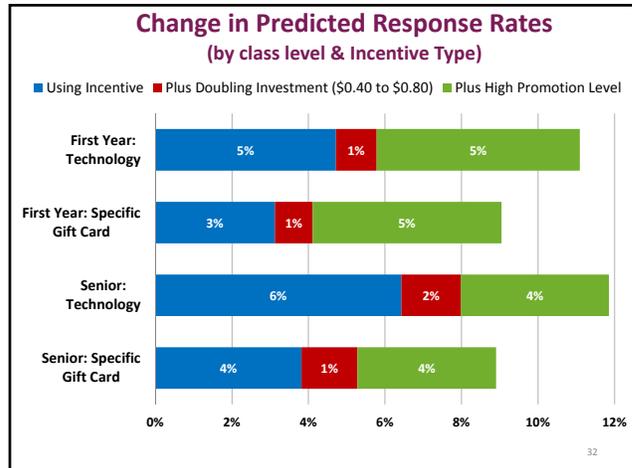
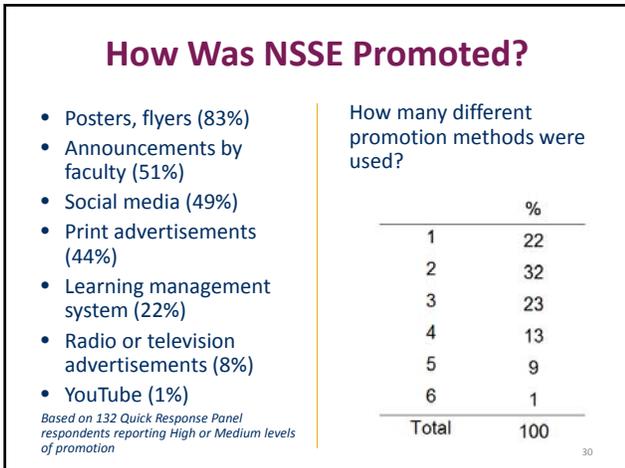
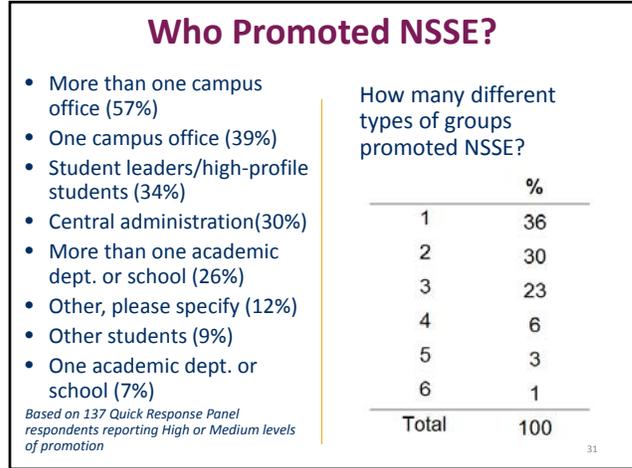
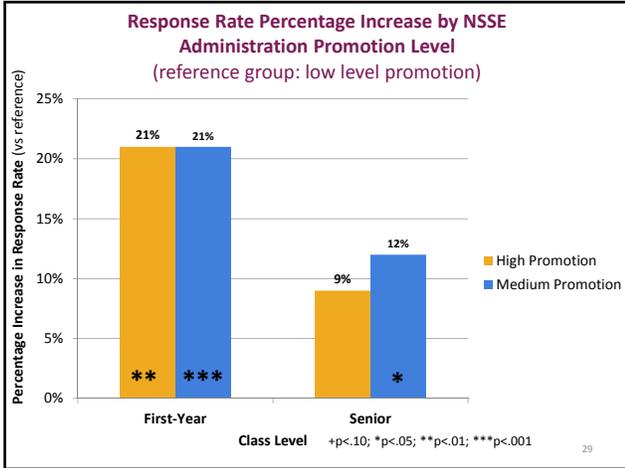


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### Question #4

What effect does campus promotional efforts have above and beyond incentives? Does it vary by class level? What mechanisms do schools choose (posters, social media) and who is involved?

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### Explaining Response Rate Variation

- Incentive type, dollar investment in incentives, and promotional effort explain a modest 9% and 7% of first-year and senior institution-level response rate variation, respectively.
- Student characteristics of campus, public-private status, and undergraduate enrollment size explain about 40%.

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### Limitations & Future Research

- Limitations...
  - 50% of variation unexplained; other uncontrolled variables may likely impact results
  - Campus context matters; we've just presented average effects
- Future research...
  - Conducting controlled experiments
  - Guaranteed prize effect?
  - Does one big prize mean more than several smaller ones, thereby increasing winning odds?
  - Multi-level approach to investigate student-level
  - Interaction between incentives and promotions?

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### Conclusions

- Results confirm NSSE anecdotal evidence that lottery incentives, dollar investment, and promotional efforts boost response rates.
- Incentive impact varies by type and class level.
  - All types “work,” but Technology and General Gift Cards appear best; Specific Gift Cards less so.
  - Senior response increases a bit more than first year
- Conducting lotteries can increase response rates between 3% and 6% but \$s matter.
- Other types of promotions are effective, too: 4% to 5% increase with some effort

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### Thank you!

Paper available at:  
<http://nsse.iub.edu/html/pubs.cfm>

ssarra@indiana.edu  
 colejs@indiana.edu