Effectiveness of Web Survey Post-Incentives By Type and Amount: Impact on Response Rates and Data Quality for a Student Campus Climate Study

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Outline of topics

- **Background**
- *Research Questions*
- *Methods*
- *Results*
- *Discussion*

Background

- *We chose to do this experiment because:*
  - *Many studies rely on traditional web surveys, conducted all by email*
  - *This is particularly true with survey of students*
  - *Lotteries and post-paid incentives are common*
    - *Differential amounts*
      - *(Sauermann, Roach, 2013)*
  - *Varying effectiveness depending on method of delivery*
    (e.g. Goritz, 2006; Singer & Ye, 2013; Brown et al. 2016)

Background

- *Budgets often severely limit options*
- *Sample limitations exist, frequently*
  - *No mailing addresses – meaning no advance letter with URL or $*
  - *No phone numbers, etc.*

- *A particularly useful study: Campus climate survey*
  - *Many universities doing same or similar study*
  - *Many student surveys done by web*
  - *Includes Q's about sensitive data*

Background

- *Framing this as a practitioner, there are some specific practical things we are wondering about:*
  - *Cash is king, but mailing cash is costly.*
  - *Cash apps are on the rise –will they work in this context?*
  - *Campus ID would be cheap and easy, but we have the concerns that they impact will be disproportionate.*

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Examine effectiveness of delivery and amount of incentive

- *Research questions:*
  - *Is a specific type of incentive condition more effective for survey participation?*
  - *Specifically, is it better to do a lottery or non-lottery incentive?*
  - *For non-lottery incentives, how do the different methods of delivery (Cash, Student ID credit, Amazon Gift Card, Venmo transfer) compare?*
  - *For non-lottery incentives, how do the different amounts ($5/$10) compare?*

Today we are looking at…

- *Response rates*
- *Survey Response Data Quality*
- *Sample Representativeness*
- *Costs*

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2021 UW-Madison Student Campus Climate Survey

- *Designed by and sent out by UWSC Survey Center*

- *8 Contact web survey:*

October 19, 2021	*November 1, 2021*
October 22, 2021	*November 3, 2021*
October 26, 2021	*November 6, 2021*
October 28, 2021	*November 8, 2021*

Nine Incentive Groups

Lottery Incentive	Non-Lottery Incentives	
$100	*$5*	*$10*
25 Cash Prizes	*Cash (N=~3,500)*	*Cash (N=~2,500)*
(N=~23,500)	*Student ID (N=~3,500)*	*Student ID (N=~2,500)*
	Amazon (N=~3,500)	*Amazon (N=~2,500)*
	Venmo (N=~3,500)	*Venmo (N=~2,500)*

- *All incentives were contingent on participation*

Email text on incentives examples

Lottery incentive

"You will **be entered into a drawing to win one of twenty-five $100 cash prizes** *for completing the survey."*

Non-Lottery incentives

"You will **receive a ($5/$10) (Cash/Student ID credit/Amazon Gift Card/Venmo)** *for completing the survey."*

* There were specified – Sample members were not offered a choice

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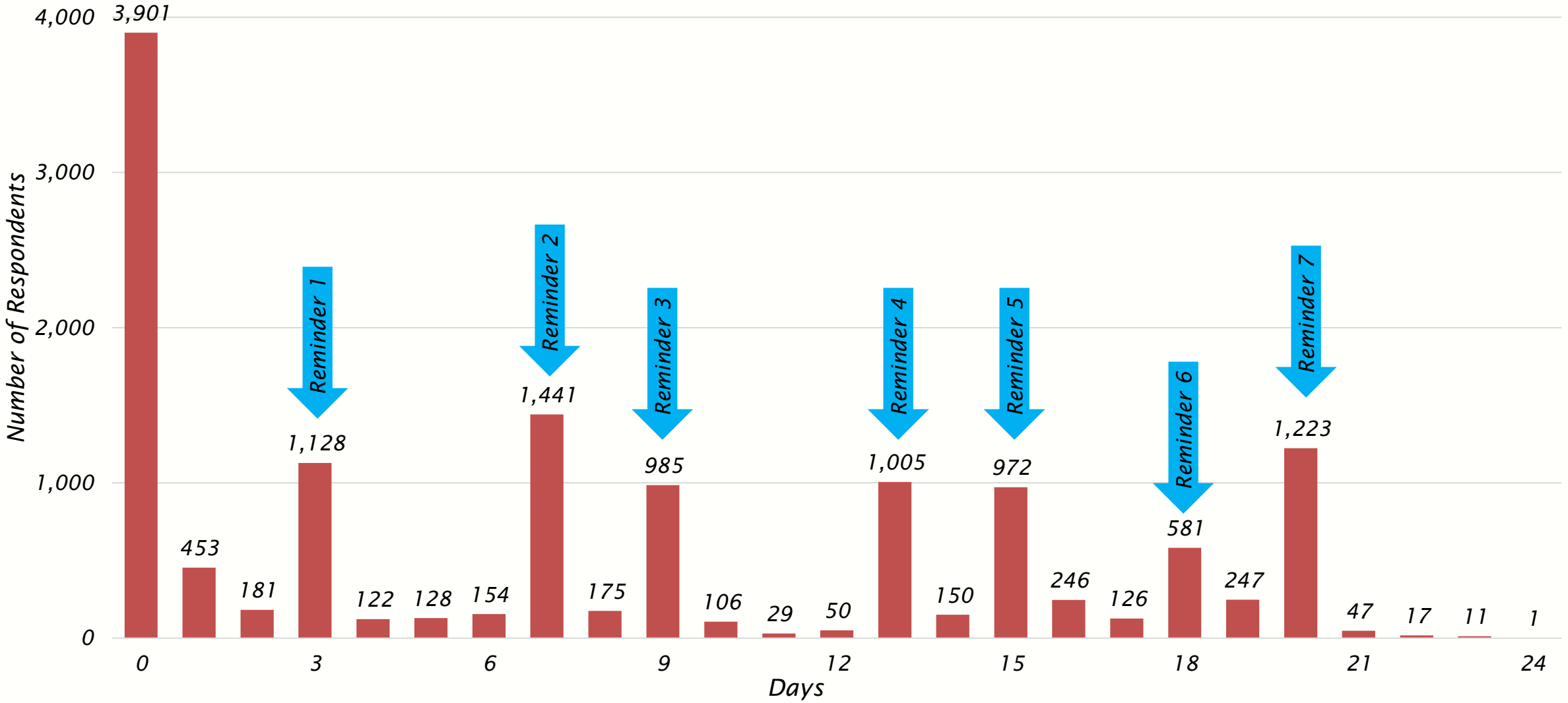
Results

- Response rates
  - Completion rates by Incentive Condition
- Survey Response Data Quality
- Sample Representativeness
- Costs

Number of Responses Over Time



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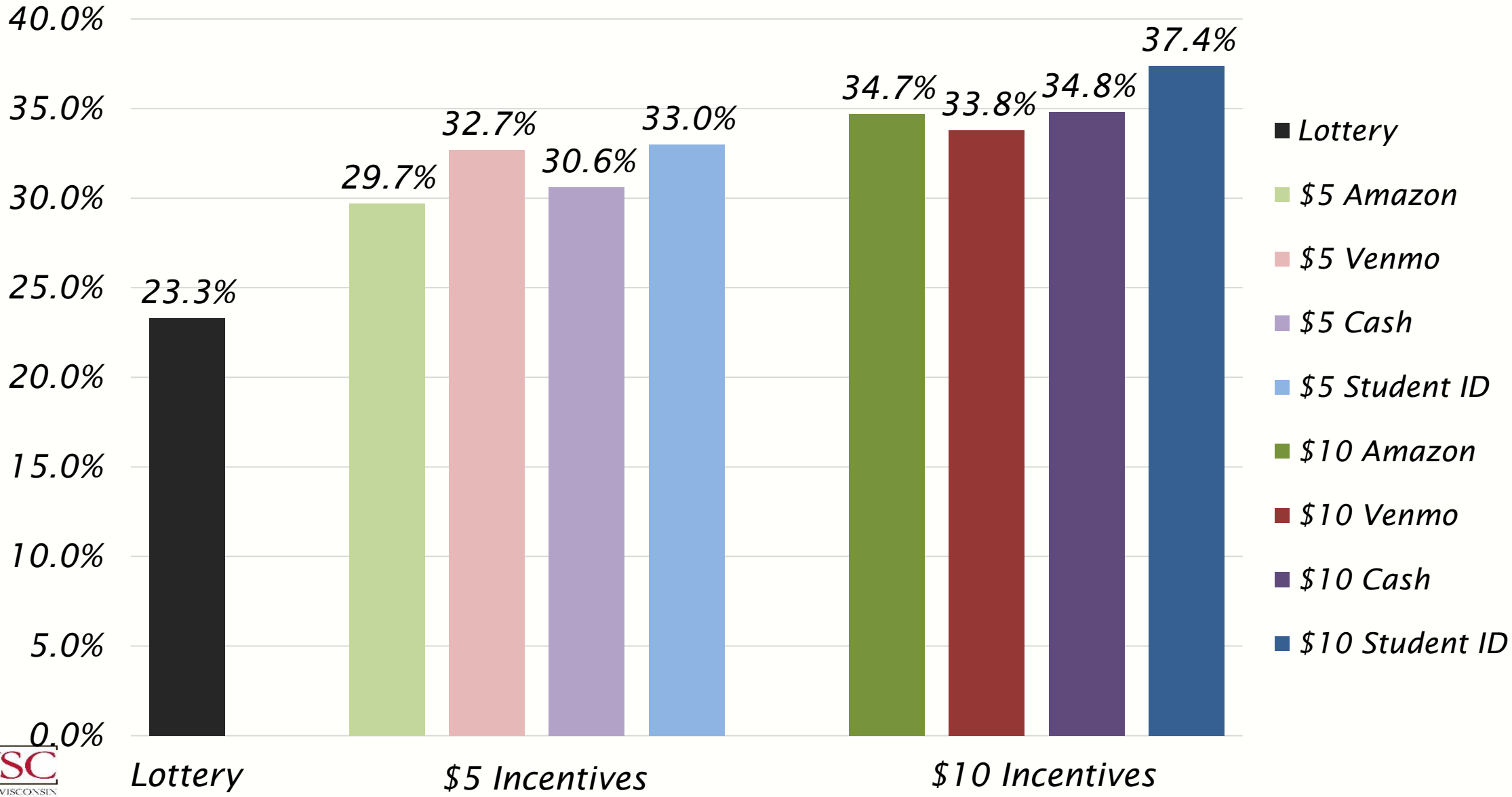
Response rates by incentive condition



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Response rates - Analysis

- *Analyzed lottery status, amount, method of delivery separately*
  - *Those who receive lottery are* **less likely** *(38%) to respond*
  - *Recipients of the $10 post-paid incentive are* **more likely** *(18%) to respond*
  - *Those assigned the Student ID incentive are* **more likely** *to respond than those who receive cash or amazon, but not Venmo*

- *Also explored method of delivery and amount together*

- *Points to amount being a greater factor than the way in which the incentive is delivered*

Results

- Response rates
  - Completion rates by Incentive Condition
- Survey Response Data Quality:
  - Item non-response
  - Straightlining
  - Response times
  - Reporting of sensitive items
- Sample Representativeness
- Costs

Survey response data quality

- *Item non-response*
  - *Lottery – slightly more missing data*
  - *$10 - slightly less missing data*
- *Straightlining*
  - *No differences by lottery status, method of delivery, or amount*
- *Response times*
  - *neither lottery status or method of delivery mattered*
  - *$10 - higher response times*
- *Reporting of sensitive items*
  - *No differences by incentive condition*

Results

- Response rates
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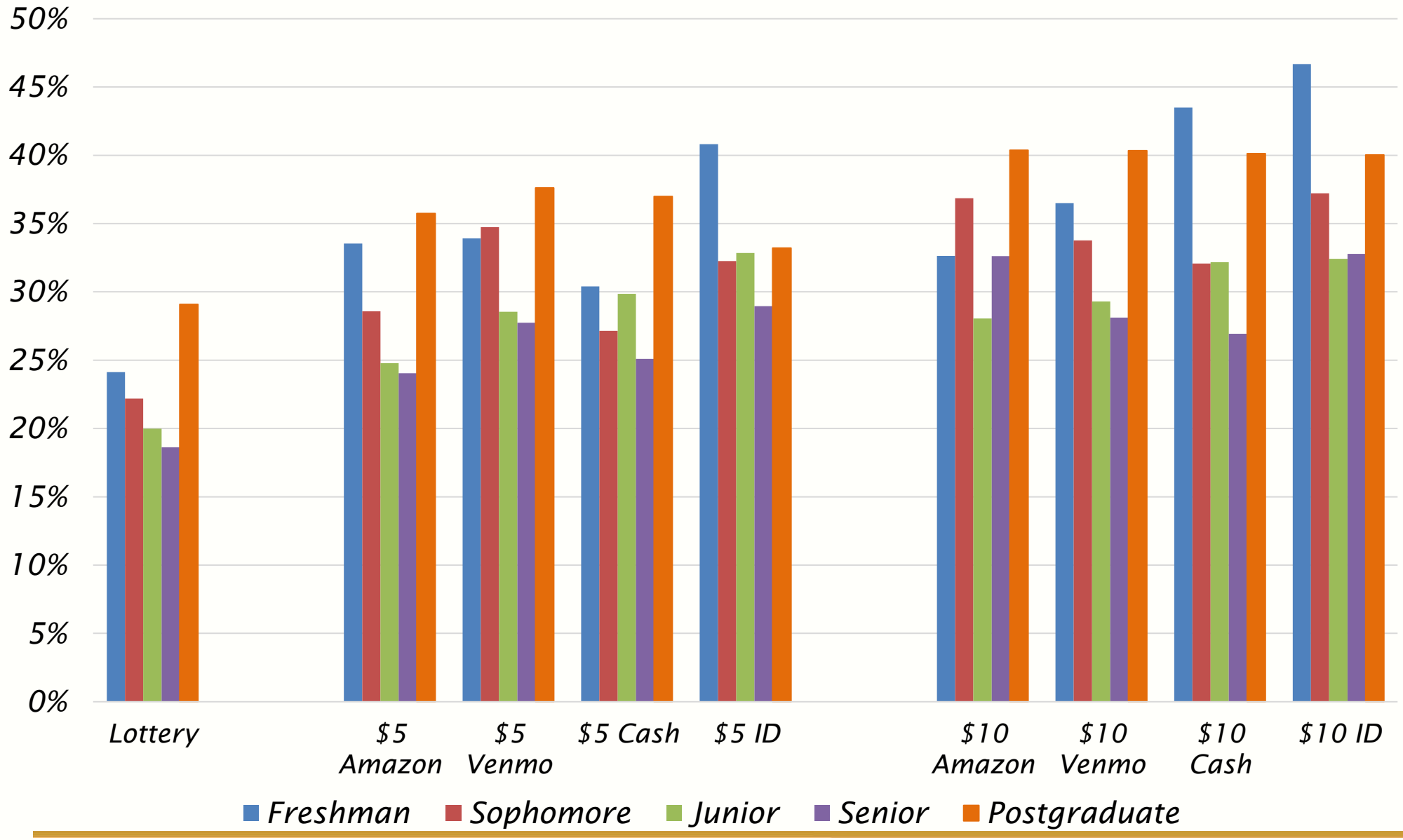
Sample representativeness

- *Did not have admin data – had to compare responding population to overall student population data*
- *Looked at*
  - *Gender*
  - *Race*
  - *US vs. international*
  - *Grad vs. undergrad*
  - *Year of undergrad*
- *No clear or consistent pattern*

- *What about response rate by year in school?*

Response rates by incentive condition – Student Groups



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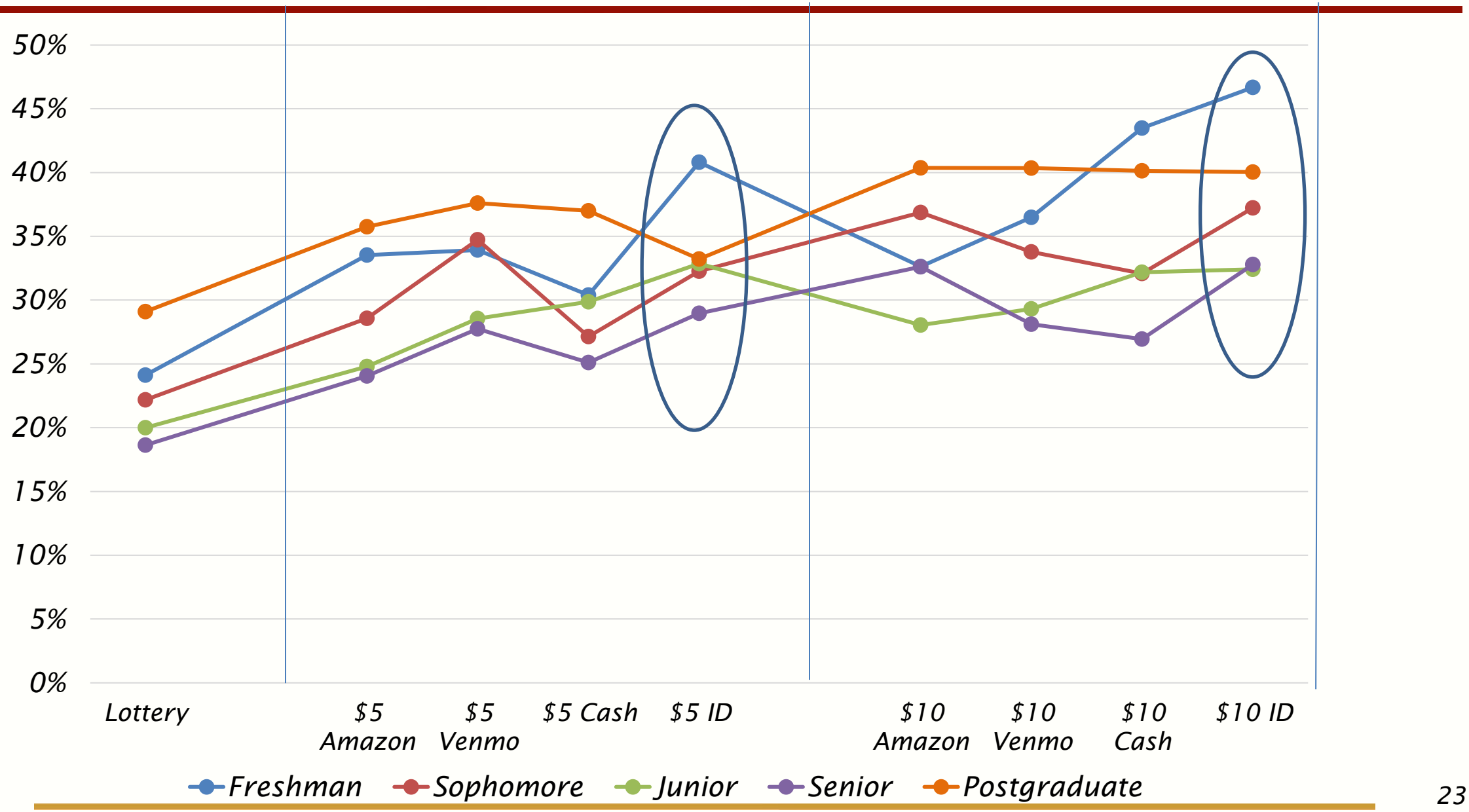
Response rates by incentive condition – Student groups



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Results

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Variable costs for incentive administration by Incentive Group

	Lottery	$5 Incentives				$10 Incentives			
Group	*Lottery*	*Amazon*	*Venmo*	*Cash*	*ID*	*Amazon*	*Venmo*	*Cash*	*ID*
Response Rate	*23.3%*	*29.7%*	*32.7%*	*30.6%*	*33.1%*	*34.7%*	*33.9%*	*34.8%*	*37.4%*
N	*23,500*	*3,500*	*3,500*	*3,500*	*3,500*	*2,500*	*2,500*	*2,500*	*2,500*
Cost per Complete	*$0.46*	*$5.00*	*$5.10*	*$6.57*	*$5.00*	*$10.00*	*$10.10*	*$11.57*	*$10.00*

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** Start-up costs varied dramatically by group*

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Cost analysis- Important Caveats

- *Lottery*
  - *Cheaper – same cost regardless of sample size*
  - *Response rate lowest*
  - *May do nothing at all - i.e. a total waste of money*

- *Amazon*
  - *Unclaimed e-certificates unknown and donated to Amazon*
  - *Administration challenging within UW*

- *Venmo*
  - *Administration VERY challenging within UW*
  - *Unclaimed returned to UWSC*

Cost analysis- Important Caveats

- *Student ID*
  - *Extremely inexpensive to administer within UW*
  - *Unclaimed dollars unknown, but much less common and donated to UW-Madison*

- *Cash*
  - *Some bills are returned to sender, but very few*
  - *Perhaps more salient to receiver?*

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Takeaways

- **Lotteries** *for nearly every metric led to* **worse** *survey response, data quality and sample representativeness – compared to guaranteed incentives*
- **Amount mattered more than method** *of delivery for data quality*
- **Student ID** *incentives increased sample representativeness*
- *Lottery had lowest cost, but also lowest response rate*
- *Impact on cost - different for a study of N=45,000 than N=2,500*

Takeaways

- ***Biggest surprise: Student ID worked much better than expected***
  - *Unique characteristics of UW Campus*
  - *Type of student body*
  - *Slight discounts when using campus ID*
  - **Untested theory:** *May add to overall legitimacy of study*
- *Venmo option involved much more administrative hassle*
  - *Admin hassle could vary by type of survey organization*
  - *Is only one of several cash app options*
- *$10 performed better, but is it worth the extra cost? Case by case basis*

Limitations

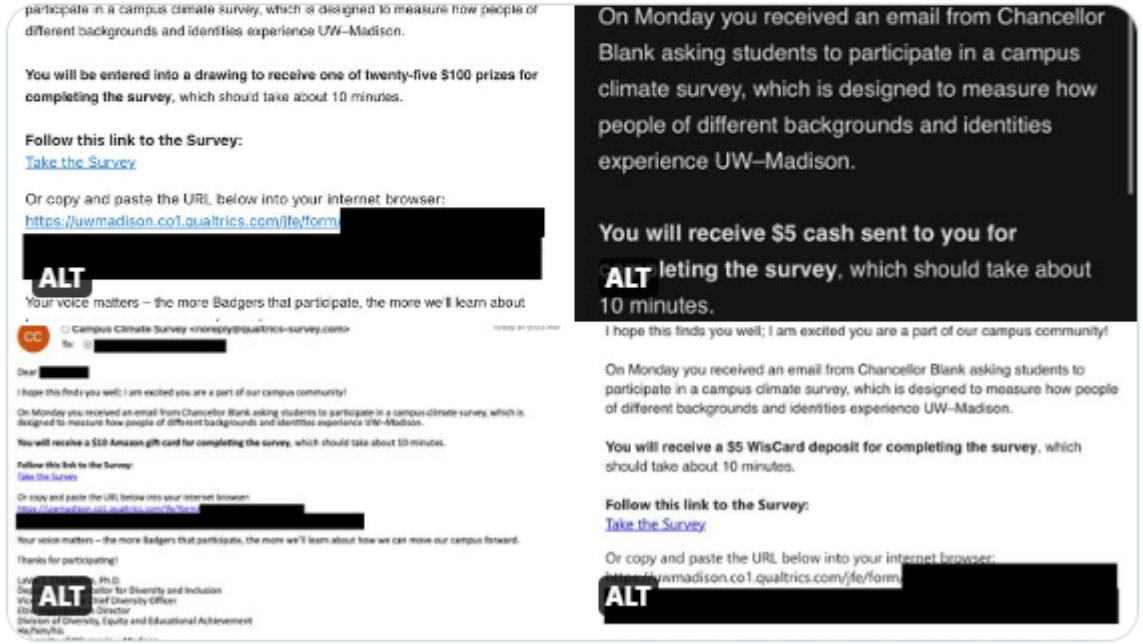
- *Could not compare to a control group with no incentive treatment*
- *Did not have access to full administrative data to look at nonresponse*

Experimenting with the whole population….

← **Thread**

Ben Pettis is @bpettis@mastodon.benpettis.ninja
@ben_pettis_

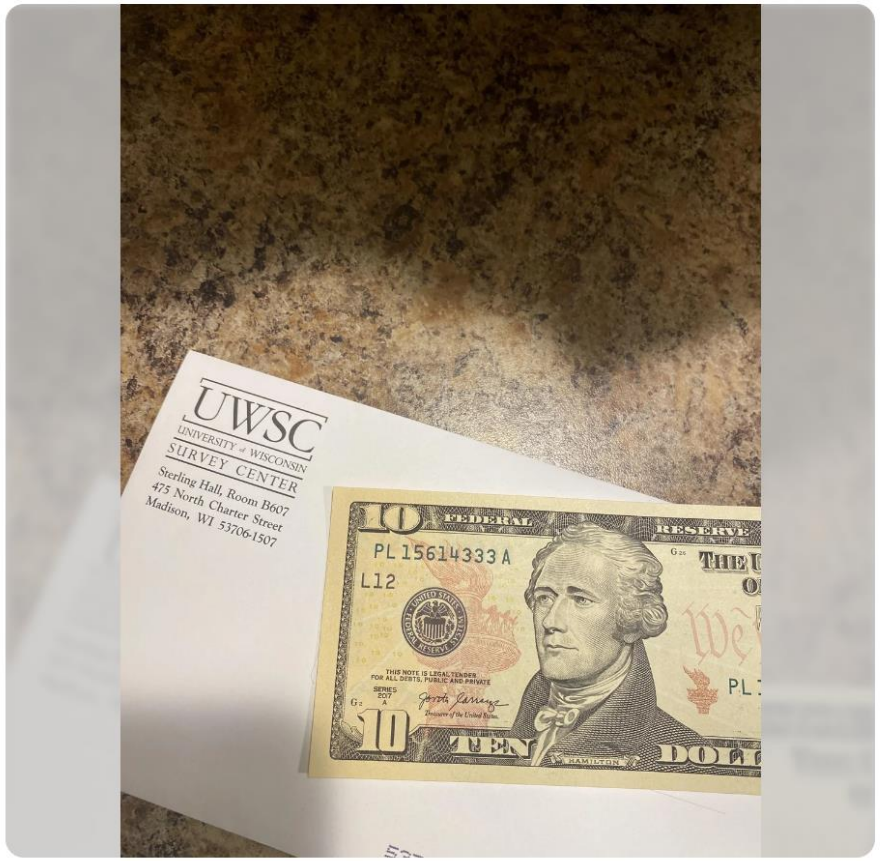
There's a "Campus Climate Survey" going around and @UWMadison says that they value my voice. But evidently they value my voice differently than others' voices by literally offering a different dollar amount to complete the survey. Just look at the range of incentives!



11:47 AM · Oct 19, 2021

r/UWMadison
by kumboochi 1 yr. ago

it wasn't a scam i actually got my $10 cash lol



145 14 Share

Experimenting with the whole population….



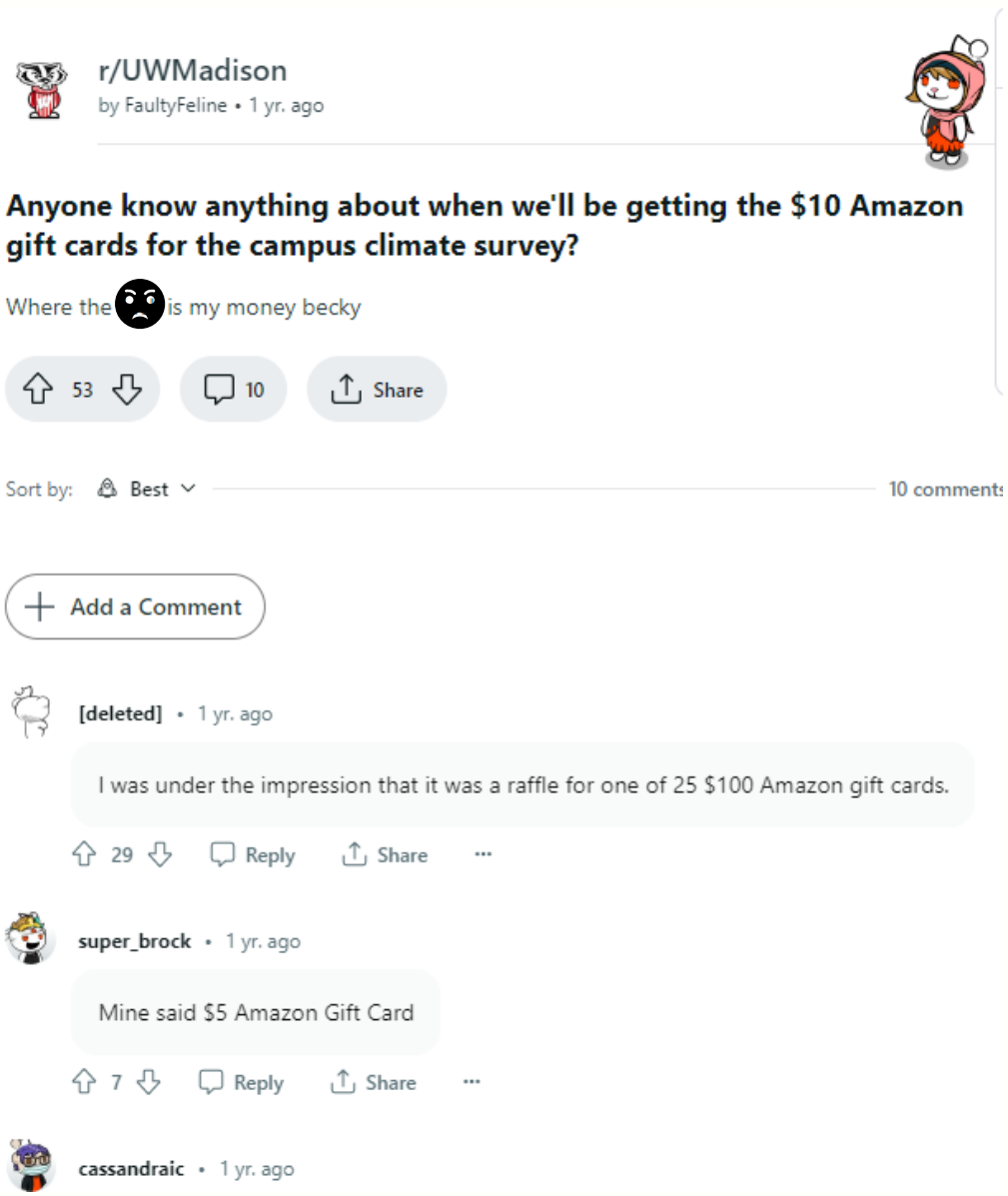
Ben Pettis is @bpettis@mastodon.benpe... @ben_... · Oct 19, 2021
@UWMadison what's the reasoning behind different incentives? Is it based on our reported gender, race, ethnicity and other demographics? I sure hope that isn't the case because that's a *super* not good look
1 2

Ben Pettis is @bpettis@mastodon.benpe... @ben_... · Oct 19, 2021
@TAA_Madison - this may be of interest to look into a bit
3

UW–Madison Diversity @uw_diversity · Oct 19, 2021
Hi there. We are offering a variety of small incentives to students to help ensure a robust response. Students were assigned to different incentive groups completely randomly. This is a standard practice for many kinds of surveys & helps us understand what incentives work best.
1 2

Ben Pettis is @bpettis@mastodon.benpe... @ben_... · Oct 19, 2021
Thanks for the info. I appreciate the transparency about the use of differing survey incentives to increase response rates
1

Show replies



r/UWMadison
by FaultyFeline • 1 yr. ago

Anyone know anything about when we'll be getting the $10 Amazon gift cards for the campus climate survey?

Where the is my money becky

53 10 Share

Sort by: Best 10 comments

Add a Comment

[deleted] • 1 yr. ago
I was under the impression that it was a raffle for one of 25 $100 Amazon gift cards.
29 Reply Share

super_brock • 1 yr. ago
Mine said $5 Amazon Gift Card
7 Reply Share

cassandraic • 1 yr. ago

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stevenso@ssc.wisc.edu

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Survey response data quality - Straightlining

- *Multiple Batteries of items:*
  - *How often students feel [___]?*
    - *Welcome*
    - *Respected*
    - *Excluded*
    - *Safe*
    - *Life they belong*
  - *How often students spent time with people from different groups:*
    - *Students who are of a race or ethnicity other than your own*
    - *Students who have a sexual orientation other than your own*
    - *Students who have different religious or spiritual beliefs other than your own*
    - *Students who have political views other than your own*
    - *Students who are from a country other than your own*
    - *Students who are from a social class or economic status other than your own*
  - *All questions used ordinal response categories such as:*
    never, rarely, sometimes, very often, extremely often

Survey response data quality - Straightlining

- *Non-differentiation method*
  - *Removed respondents with missing data*
- *No differences by lottery status, method of delivery, or amount*
- *This is consistent across each individual scale and for an average of all*

Survey response data quality – Response Time

- *Presume less time means less care in response*
- *Length of time a student spent on a given question in seconds*
  - *Trimmed and Logged*
- *Logged values showed that neither lottery status or method of delivery mattered*
- *Those receiving a $10 incentive had* **higher** *response times*

Survey response data quality - Reporting of sensitive items

- *Looked at key outcome variables*
  - *Satisfaction with Campus Climate*
  - *Feeling welcome*
  - *Feeling respected*
  - *Feeling excluded*
  - *Feeling safe*
  - *Feeling like they belong*
  - *How much are comments or questions respected in class by faculty*
  - *How much are comments or questions respected in class by other students*
  - *How comfortable are students in approaching faculty with questions*
  - *How comfortable are students with studying with others*
  - *How comfortable are students with socializing with others*
- *No differences by incentive condition*