## How Might Response Rate Affect Your Survey?

Look at the example below to see the effect that non-response bias might have on survey results. Let's say you conduct three surveys of the same sample of ten students hoping to learn the percentage that received A's in a recent class:

Survey 1: Only two of the ten students respond. They both received A's, so your survey reports $100 \%$ of the students received A's.


Survey 2: Four of the ten students respond, including the two who received A's, so according to this survey, $50 \%$ of the students received A's.


Survey 3: Six of the ten students respond. With two receiving A's, this survey reports that $33 \%$ of the students received A's.


So, what impact did non-response bias have on our three surveys?
Actual Sample: In reality three of the ten students (30\%) received A's.

## 

What does it mean?
Here's the breakdown of the potential magnitude of non-response bias for the three surveys:

## Survey $1=70$ Percentage Points Off Survey $2=20$ Percentage Points Off Survey 3 = 3 Percentage Points Off

These surveys illustrate how non-response bias can affect how well data represents the population being surveyed. If someone relied on Survey 1 data for decision-making, they'd be way off. Survey 2 is much closer to the actual, but is still not a very good estimate. Survey 3, though, with a higher response rate, gives a pretty close estimate of the true value-only 3 points off.

Non-response bias can become an issue when there are distinct differences between the people who respond to a survey and the people who don't respond. For example, students receiving A's may feel more confident sharing their grade than the one who received an F , even if the survey is anonymous.

Keep this example in mind the next time you're using survey results and be aware of the response rate.

