Sampling in Student Affairs

by C. Colgate Taylor

* When is it best to send a survey to everyone and when will random sampling be just as effective? For example, if we did random sampling for the XYZ survey, would the results be just as reliable? Could our data still be compared with national data? Short Answer | We should almost always employ sampling.

Basic Concept | By very definition a survey is a questionnaire designed to retrieve information from a sample of a population. A questionnaire administered to an entire population is a census.

Survey vs. Sample | It is best to send a survey to the entire student population only when a census is needed.

Census Example: The Career Center wants to know who all of the employers were of the Class of 2013
Reason for Approach: One would not be able to predict unknown data needed by Employer Relations Staff. An Even Better Approach would be to build the method for collecting this information into existing systems, perhaps it could be a simple field in the applications for graduation? Always ask, “where else could this information be observed”?

Survey Example: National XYZ Residential Life Experiences Survey designed to learn more about the residential experiences, satisfaction with RA’s, and enjoyment of residential life programs, etc.
Reason for Approach: Here, a sample would be just as effective as a “Census”. The results would be sound. We could compare to national data. The sample size needed is generally based on: 1) the size of the whole population (N = 6,500) 2) How Confident one needs to be that they are getting the “True” answer (usually 90% or 95%) 3) the expected response rate (for this example – I’ll set it at 10% which is very low for our historical response rates) 4) tolerance for a margin of error (This depends on how varied I expect the population to be on the questions). If I think the population would be polarized, a low level would be needed. Otherwise, I should be able to accept a margin of error. For this example, I’ll set my confidence Interval at 5%. With this conservative formula, I still would only need 363 respondents and to send the survey out to 3,630 students.

Confidence Level: 95%
Confidence Interval: 5%
Population Size: 5,461
Estimated Response Rate: 10%

Sample Needed: 359 (To be 95% sure results are reliable with only a 5% chance of sampling error)
Send Survey out to 3,590
Still, to be 90% Confident, we would only need 259 responses.

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1 Number of Students Living on Campus

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This whole process can change depending on the type of analysis to be run following the collection of data. For this example, 260+ responses would be sufficient to generalize to the campus population, assuming we do not plan to conduct a path analysis or other multivariate technique which require many more cases. *Historically atypical for projects not executed by AR
**Wait! If I sample, what about bias? What if I survey the wrong students?**

**Short Answer** | If you send surveys to ALL students, you are still actually sampling. It is called **Voluntary Response Sampling.** And, the worst thing we do to contribute to bias is to send so many surveys to all students.

**Longer Answer** | When we use **Voluntary Response Sampling,** students self-select instruments (*fewer instruments over time*) to complete. Respondents tend to be persons who are polarized on issues, which debilitates us from capturing a good picture of the campus community. The best way to limit sampling bias is to create random (or stratified) samples, reflective of the campus population.

*If I “sample” do I need to offer big incentives? Do they create sampling bias? Are there certain kinds of surveys that would be particularly susceptible? Is bias more likely if the prizes are larger?*

**Short Answer** | Good for long surveys, Caution with Surveys of a Sensitive Nature; Prizes can hurt the integrity of the findings

**My Philosophy around Incentives** | The best incentive for someone to complete a survey is a real promise that their voice will be heard, and action(s) will be taken following a good analysis. When Altruism doesn’t work *(and it usually does over time)* – the other reasons people respond to surveys are either interest in the topic at hand – or compensation.

**Incentives:** Good when a survey is long; Caution should be taken for surveys of a sensitive nature; large prizes can create bias; Incentives have only modest impacts on response rates; To provide an incentive, surveys collect information *(traditionally)* to send prizes to winners. So, on some surveys, incentives might increase response rates, but weaken the validity of the responses given.

*Are incentives more or less likely to cause sampling bias if the administration is to everyone or a sample or is there no difference?*

**Short Answer** | The sample should be chosen with the purpose and target audience of the survey in mind.

**Longer Answer** | Right now, so many surveys are being sent across campus. I cannot predict what the responses would look like initially with sampling. It is a relationship that needs to be built over time with the student population. Efforts have been taken to *brand* Student Affairs instruments in an effort to increase response rates. When a student sees a request for survey from the division, we want them to know it will be: 1) short, 2) worth their time and 3) that their privacy is respected. Building strong instruments, piloting instruments, and reducing the number of instruments are all surely more impactful than a raffle.

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