

Step Two

Collect Your Data — *Quantitative Methods*

As part of planning your survey, you will decide whether to collect data from a subgroup (sample) of your target population and generalize their responses to the whole population or to collect data from the entire group targeted by the survey.

Sampling is used when working with large groups of people where it is impractical to send a survey to everyone, so you send the survey to a portion of the group. *Random sampling* means everyone in the population has an equal chance of being included in the sample. For example, if you want to know how many licensed social workers in your state have access to online medical journals, you probably do not have to survey all social workers. If you use random sampling procedures, you can assume (with some margin of error) that the percentage of all social workers in your state with access is fairly similar to the sample percentage. In that case, your sample provides adequate information at a lower cost than a census. For details about random sampling, see Appendix C of *Measuring the Difference*. [1]

With smaller groups, it is possible to send the survey to everyone. This is known as a census. In this case, any information you summarize is a description of the group of respondents only. For instance, if you survey all seniors who were trained in your outreach project to use MedlinePlus and 80% of them said they used it at home one month after the session, you can *describe* how many of your trainees used MedlinePlus after training. This percentage provides important information about a result of your outreach project.

However, because you have not randomly sampled from among all seniors who have ever been trained on MedlinePlus, you cannot make a *generalization* that 80% of all seniors who get training on MedlinePlus use it within one month of training.

The quality of your survey data, whether collected through a sample or a census, depends heavily on how many people complete and return your questionnaire. The percentage of people who return a survey is known as *response rate*. When a high percentage of people respond to your survey, you have an adequate picture of the group. But when you have a high percentage of nonrespondents, characteristics of the group remain unknown to you, making it difficult for you to interpret your results. Therefore, your results may be biased and unreliable. For instance, the respondents may have been more enthusiastic or more dissatisfied compared to nonrespondents. If the survey was administered electronically, those who returned the survey may be more computer-literate. However, though you may suspect bias when your response rate is low, you may not know how or by how much.

Statisticians seldom agree about what constitutes an adequate response rate, but few would accept levels below 50%. Using techniques like those described in Figure 2, survey researchers usually obtain response rates in the range of 50-80% [3], which seems to be the acceptable standard among most survey researchers.

Figure 2: How to administer surveys

1. When using mail surveys, always send a *personalized* pre-survey letter to the target audience from someone influential or well-liked by the group. For electronic or on-line surveys, send a personalized pre-survey e-mail message announcing that a survey will be sent via email within the next week.
2. Within a week of the pre-survey letter, send the survey with a personalized cover letter (e.g., “Dear Jane Smith”) or personalized email with a link to the survey.
3. Within a week after sending the survey, send a personalized reminder postcard or email.
4. Within two weeks, send or email another survey, again with a personalized cover letter.
5. Keep track of undeliverable surveys. If you mail surveys, be sure to use first class mail so undeliverable surveys are returned to you. If you send surveys through email, keep track of the returned emails and, if possible, send print surveys to those participants. This mixed-method approach has been shown to increase response rates for electronic surveys.
6. Consider using these tips to increase your response rates:
 - Certain survey design principles may increase response rates. Be sure to start your survey with interesting questions that are easy to answer. Do not start with open-ended questions because they may make the survey seem overwhelming to respondents. Most research shows that demographic questions should be at the end of the survey because respondents find them boring or, in some cases, offensive.
 - Incentives may help your response rate. For mailed surveys, research indicates that the best time to send an incentive is *with* the first survey, not after the survey has been returned to you.[5] For web surveys, one study showed that being entered into a lottery for a larger financial incentive seemed to work better than prepaid or postpaid incentives.[6] It is important to note, however, that most survey researchers think that making multiple contacts (such as those described in this box) has an equal or greater positive effect on response rates compared to incentives. So if you have to choose between incentives or postage for replacement surveys, choose the latter.

Figure 2 defines a typical protocol for administering mailed surveys. Studies show that these procedures are effective for surveys sent either through regular mail or email. [3,4] Because online surveys are becoming increasingly popular, Appendix 2 of this booklet presents more detailed suggestions for designing and sending electronic surveys that may help to increase response rates. [4]

Getting a high response rate can be difficult, even when you implement procedures for improving it. If you fail to get a return rate of 50% or more, you may wonder if the data are worth analyzing. Very few evaluators would discard data. Instead, they would analyze it but try to discern where the bias might be. If resources allow, they also may attempt to contact nonrespondents with a short version of the survey to assess the level of bias in the sample. Evaluators also may compare their findings from surveys against information they have collected through focus groups, interviews, and other qualitative methods to see if the numbers are consistent with survey findings. The important thing is that you report your data along with the potential biases so that readers of your report can make an informed assessment of the credibility of the findings.

The cover letter is an important part of the survey process. It should include information that might affect an individual's decision to participate. On the one hand, it is a motivational tool to induce the recipient to take the time to respond to the survey. The cover letter can also serve as a vehicle to

inform the individual of any potential risks to participation. This is called “informed consent.” If you must have your project reviewed through an institutional review board (IRB) or some other type of review board, you should get specific details of what should be in the letter. If you are not working with an IRB, evaluation ethics still require you to provide some standard information for respondents before they take the survey:

- Why you are conducting the survey and why their participation is important,
- How you plan to protect the respondent's confidentiality or anonymity,
- The risks and benefits to the respondents who choose to participate,
- The voluntary nature of their participation and their right to withhold answers at any point in the survey, and
- How their responses will be reported and to whom.

Once you have received the last of your surveys, you will have accumulated raw data that you must try to understand. To do so, you must summarize the raw data so you can then analyze it.