Step One | **Design Your Data Collection Methods** — *Quantitative Methods*

A data collection method is a procedure for gathering information. For surveys, the method comprises two parts: the questionnaire and the group that receives it. The first step in designing your survey is to write out the general *evaluation* questions you want to answer. *Evaluation* questions are different from your *survey* questions, which are specific, carefully formatted questions designed to collect data related to the evaluation questions.

For instance, listed below are some sample *evaluation* questions.

- *Community or pre-project assessment*. During the planning stages of an outreach project, you can use surveys to assess your outreach community members' beliefs, attitudes, and comfort levels in areas that will affect your outreach strategies. Evaluation questions may be:

  —*"What health information resources do people in this community use most often?"*
  —*"How many people are experienced Internet users?"*

  If you have a logic model, you should review the resource and activities columns to help you to focus the needs assessment questions.

- *Process assessment.* Surveys are often used mid-project to get participants' feedback about the quality of the activities and products of your outreach project. So your evaluation questions might be:

  — *"How do participants rate the effectiveness of our teaching methods?"*
  — *"How do participants rate the usefulness of the online resources we are providing?"*
  — *"How many people are likely to use the health resources after the training session?"*

  You should look at the activities and inputs column of your logic model to determine the questions you might want to ask.

- *Outcomes assessment.* At this stage, you use surveys to help assess the results of your outreach project. So questions might include:

  — *"Do participants use the online resources we taught after they have completed training?"*
  — *"Have participants talked with their physicians about something they found at MedlinePlus?"*
  — *"How many health care professionals trained in our study said they retrieved information from MedlinePlus to give to a patient?"*

  When designing a survey for outcomes assessment, you should review the outcomes columns of your logic model.

Table 1: Aligning Evaluation and Survey Questions

Evaluation Question	Items for the Survey
"How do participants rate the quality of the training session?"	• How satisfied were you with the information presented during the training session? (response options: very satisfied/somewhat satisfied/neutral/somewhat dissatisfied/very dissatisfied) • Would you recommend this session to others? (response options: yes/no/don't know) • Do you think you will use the online resources in the future? (response options: yes/no/don't know)

The second step is development of survey questions for your questionnaire to help you answer your evaluation questions. One approach is to use a format like that shown in Table 1 to align survey questions with evaluation questions.

Before you actually design your questionnaire, you might want to look at existing ones for their format and layout. Examples 1-6 will give you some ideas for formatting survey questions. You also could try contacting colleagues with similar projects. They may be willing to share their surveys. Journal articles about health information outreach projects sometimes include complete copies of questionnaires. If not, the article will provide the authors' contact information so that you can request copies of their surveys. Writing surveys can be tricky, so you should consider using questions from other projects that already have been tested for clarity and comprehension. However, if you do copy verbatim from other surveys, *always* be sure to secure permission from the original author or copyright holder.

Example 1 Two-Option

Have you used MedlinePlus since the training session?

☐ Yes ☐ No ☐ Not sure

Comments

- The yes-no item works well for collecting factual information, like peoples' participation in activities, exposure to publicity materials, or experience with specific online resources.
- Other two-option formats are "true/false," "support/oppose" or "agree/disagree."
- Include a "don't know" or "not sure" option for participants who either cannot remember or are not sure about the information you are requesting.

Example 2: Best Option

The last time you looked for health information on the Internet, who were you getting it for? (choose one)

- Myself
- A family member
- A friend or coworker
- A supervisor
- A client
- Other (please describe______________________)

Comments

- Best option items are good for collecting information about the respondent's attributes and behaviors.
- Make sure that choices do not overlap so that each person can easily choose *only* one response.
- Provide an "other" response for options that are not included on the list.

Example 3: Multiple Option

Where do you get health information? (check all that apply)

- From my doctor or clinic
- Newspapers and magazines
- Television
- Radio
- Friends or family members
- Other (please describe______________________)

Comments

- This is a faster version of the "yes/no" format: a check means "yes" and blank means "no."
- If your list of options gets to be more than 6 or 7 items, use a "yes-no" format instead. If the list is too long, people may not consider every item. When forced to respond, they are more likely to look at each item.
- Use "Other" even if you think you have listed all possible responses. People will use this option if they are not sure where their option fits.

Example 4: Rating Scales

Version 1 Please check the option that indicates your level of agreement with the statement.

Because of the training session, I am much more confident about my ability to find information about my health concerns.

☐ Strongly Agree	☐ Somewhat Agree	☐ Uncertain	☐ Somewhat Disagree	☐ Strongly Disagree

Version 2 Please circle the option that indicates your level of agreement with the statement.

How helpful were the group exercises?

Very helpful	1	2	3	4	5	Not at all helpful

Comments

- These two formats are good for collecting information from respondents about their attitudes, feelings, beliefs, and opinions.
- A neutral point is usually recommended for participants who do not have strong opinions in either direction about the item.
- You can provide as many response choices as you want, but most experts believe 5-7 options are adequate.

Example 5: Rank-Order

Listed below are different health topics that could be included on a consumer health Website. Rank the features in terms of how important each topic is to you, with "1" as the most important feature and "7" as the least important.

__ Specific health conditions
__ Wellness information
__ Alternative medicine
__ Prescription drugs
__ Health insurance, Medicaid, Medicare
__ Clinical trials
__ Health news

Comments:

- This format should be avoided. Ranking items is a difficult task for respondents. Also, you may force respondents to rank two items that are of equal importance to them. When possible, choose a rating scale (Example 4) instead of a rank-order item.
- Statistical analysis of rank-ordered items is very tricky because responses across individuals are not comparable. Using the item above as an example, two people may rank Prescription Drugs as the most important feature of a Website relative to the other features in the list. However, the first respondent may think everything on the list is important and the second may think nothing is important, so a "1" tells you nothing about the strength of the importance to each respondent. To analyze this type of data, the best you can do is show how many times an item was ranked, for instance, as 1 or 2.

Example 6: Open-Ended

List at least two important things you learned in the training session today

1.____

2.____

Comments:

- This format yields qualitative data, but it is often helpful in interpreting the statistical information you gather on your survey. To analyze open-ended questions, use the methods described beginning with Step Three of the "Qualitative Methods" of this booklet on page 22.
- Avoid starting a survey with open-ended questions. Open-ended questions can be overwhelming and people may choose to not take the survey. Draw the respondent in with some interesting, easy quantitative questions and save your open-ended questions for later in the survey.

The visual layout of your survey is also important. Commercial websites that offer online survey software give examples of how to use layout, color, and borders to make surveys more appealing to respondents and easier for them to complete. There are several popular commercial products to create web-based surveys, such as SurveyMonkey (http://surveymonkey.com/).

Once you have designed your survey, be sure to pilot test it before you send it to your target audience. Even if you think your wording is simple and direct, it may be confusing to someone else. It is very easy for survey questions and options to be misunderstood, and a pilot test will reveal areas that need to be clarified. First, ask one or two colleagues to take the survey while you are present and request that they ask questions as they respond to each item. *Make sure they actually take the survey*, because they will not pick up confusing questions just by reading it.

Once you have made adjustments to the survey, give it to a small portion of your target audience and look at the data. Does anything look out of place? For instance, if a large percentage of people are picking "other" on a multiple-option question, you may have missed a common option. Only after you have piloted the survey are you ready to administer it.

The design stage also entails seeking approval from appropriate committees or boards that are responsible for the safety and well-being of those participating in your project. If you are working with a university, most evaluation research must be reviewed by an Institutional Review Board. Evaluation methods used in public schools often must be approved by the school board and community-based organizations may have their own review processes that you must follow. Because many evaluation methods pose little to no threat to participants, your project may not require a full review. Therefore, you should considering meeting with a representative from the Institutional Review Board or other committee to find out the best way to proceed with submitting your evaluation methods for approval. Most importantly, it is best to identify all of these review requirements while you are designing your methods; otherwise, your evaluation may be significantly delayed.