

Guidelines for Designing a Survey

Surveys gather information in a reasonable and cost-effective manner. We find out what people think, what they might need, and how they feel about things. It's a convenient way to reach out to several individuals at the same time.

If not constructed properly, though, surveys can generate a lot of worthless information. Only in hindsight do we realize how we should have worded a question differently or been more clear in our directions – after we've copied and mailed out 500 surveys!

Designing a good survey does not have to be a "trial and error" process though. Instead, you can benefit from the mistakes others before you have made. The checklists included here are designed to do just that. They represent a compilation of "lessons learned" from my own experience as well as from the books, articles and workshop material of other professional evaluators and researchers.

In this Guide you will find checklists for:

- **Writing good questions**
- **Getting good responses**
- **Writing demographic questions**
- **Formatting a survey**
- **Deciding on phone, on-line, mail-out, or in-person surveys**
- **Choosing the right sample size**

Writing good questions

- Be as brief as possible. Questions should consist of no more than 20 words and 3 commas. Keep multiple syllable words to a minimum.**
- Keep the question clear and specific. Use a definition, if necessary, to introduce the question and achieve specificity.**

Instead of:

How many days in the past week have you done any exercise?

Use:

This question asks about how often you've engaged in exercise. In addition to the kind of exercise you may do at the gym, our definition includes walking, work around the house, or work you do on the job if you think they constitute exercise. So using that definition, in the last seven days, how many days did you get any exercise?

Avoid double questions.

Instead of:

I like when the nurse comes to visit at my home because it's faster and more convenient
True False

Use:

I like when the nurse comes to visit at my home because I get done faster.

I like when the nurse comes to visit at my home because it's more convenient for me.

Avoid double negatives.

Instead of:

Lack of immunization for smallpox is not a problem in Denver.
O AGREE O DISAGREE O DON'T KNOW

Use:

Lack of smallpox immunization is a problem in Denver.

O AGREE O DISAGREE O DON'T KNOW

Don't make questions too demanding.

A question like this is good brain gymnastics but most of your respondents will not appreciate it or be able to answer it truthfully:

Please rank the following factors from 1 to 15 as to their importance in deciding upon your current location:

- Income potential
- Climate
- Been brought up in such a community
- Influence of spouse
- Recruited by colleagues
- Opportunities for social life
- Recreational and sports facilities
- Quality of educational systems
- Cultural advantages
- Preference for urban or rural living
- Proximity to family of origin
- Career change
- Economic desirability
- Retirement
- Low housing costs

Avoid biased or leading questions.

Two examples of leading questions:

- In this economy, do you think investing in the stock market is a good idea?
- Should the government provide health insurance for people who don't work?

- Reword questions that may be found to be objectionable by some people.**

Instead of:

How much was your total family income in 1971? \$_____

Use:

Which of the following categories best describes your total family income in 1971?

1. LESS THAN \$5000
2. \$5000 to \$9999
3. \$10000 to \$19999
4. \$20000 OR MORE

- Put potentially sensitive questions in context to promote honest answers.**

Instead of:

On days when you drink alcohol, how many drinks do you usually have per day? ____

Use:

In general, would you say that you drink:

- more than your friends
- less than your friends
- about the same as your friends?

Think about the friend that you know who drinks the most. About how many drinks would you say that person usually has? ____ And how about you? On days when you drink alcohol, about how many drinks do you usually have? ____

- Do not assume too much knowledge (e.g.: names of politicians, medical diagnoses, etc). Recognition is easier than recall.**

Instead of:

Have you ever been diagnosed with any of the following?

- A. Arteriosclerosis
- B. Hypertension
- C. Carcinoma
- D. Otitis Media

Use:

Have you ever been diagnosed with any of the following?

- A. Hardening of the arteries
- B. High blood pressure
- C. Cancer
- D. Ear infection

- Avoid questions that have several possible meanings.**

An example of a multiple meaning question would be:

When did you move to this community? (after college, when I was 27, in 1963, etc., etc.)

- Provide appropriate and well-defined time frames when the timing of an event or behavior is needed to interpret the results.**
- Keep open-ended questions to a minimum. They are burdensome for the respondent and over-using them will decrease the response rate. They are also difficult to code and analyze.**

Getting good responses

- Give respondents clear instructions on how to mark their answers. Tell them if you want them to circle their response or check it. Also let them know if you want them to limit their response to only one answer.**
- Leave sufficient space for writing answers to open-ended questions. Give respondents an indication of what you want - a paragraph or a sentence - by the amount of space you allot.**
- Align response categories vertically rather than horizontally to avoid confusion about where to mark an response.**

Like this:

1. Satisfied
2. Somewhat satisfied
3. Dissatisfied

Not this:

- () 1. Satisfied () 2. Somewhat satisfied () 3. Dissatisfied

- Make sure that responses are mutually exclusive.**

The responses to this question are not mutually exclusive. For example, which response would you mark if your dentist is "competent and caring but not businesslike?"

Which category best describes your family dentist?

- A. Competent and businesslike**
- B. Friendly and competent**
- C. Sensitive and caring**
- D. Friendly and sensitive**

- Use an “other, please specify” category - unless you are sure that you have exhausted all options.

This question requires an “Other” category. There’s no way to predict all possible answers.

What services do you hope to obtain through our Teen Pregnancy Parenting Program?

- A. child care assistance
- B. help getting back into school
- C. parenting classes
- D. food stamps
- E. health care

- Remember to allow for “not applicable” or “no opinion” responses when appropriate.

Here’s a good example of when it would be appropriate to use a “not applicable” choice. Try not to use it indiscriminately or respondents may use it as a convenient default.

Are you allowed to smoke in the workplace?

- A. Yes
- B. No
- C. Not applicable

- Be sure to balance response categories.

Here’s an example of an “out-of-balance” response set.

How would you rate the workshop overall?

- A. Outstanding
- B. Excellent
- C. Very good
- D. Good
- E. Poor

- Use adjectives to describe each point on a numerical scale so that every respondent assigns the same definition to each number listed.

Instead of:

How often are you happy? Circle the response that best applies:

10 _____ 9 _____ 8 _____ 7 _____ 6 _____ 5 _____ 4 _____ 3 _____ 2 _____ 1
ALWAYS _____ NEVER

Use:

How often are you happy? Circle the response that best applies:

5 _____ 4 _____ 3 _____ 2 _____ 1 _____ 0
ALWAYS USUALLY FREQUENTLY SOMETIMES SELDOM NEVER

- Avoid patterned responses by alternating positively and negatively worded questions.**
- Use no more than a 5 to 7 response scale for self-report surveys and no more than a 3 to 4 response scale for telephone interviews.**
- Improve recall of events by encouraging respondents to recreate the experience or association with other memorable events before they answer the question.**
- Reduce the effect of social desirability on answers by wording questions in a way that lets respondents know there are no right or wrong answers.**

Instead of:

Do you own a library card?

Use:

Many people get books from libraries. Others buy their books, subscribe to magazines, or get their reading material in some other way. Do you have a library card at this time?

Writing demographic questions

- Consider the demographic profile of individuals you want to survey and include those demographic items in your survey. Depending on the purpose of your survey and how it may be influenced by differences in demographic composition, you may want to ask about:**

Age	Marital status
Gender	Education level
Income	Number/ages of family members
Occupation	Geographic location
Race/Ethnicity	Religious affiliation

- If you need to know exact age use an open-ended question. Otherwise ask respondents to categorize themselves in age categories. The width of age categories for teens and seniors are usually narrower than the general population.**
- “Income” is usually considered a personal question. Ask a close-ended question with clear parameters, i.e. annual or monthly, before or after tax, etc. Add an artificially low answer to increase comfort.**

- Determine how the data will be most useful to you once it is collected to determine how to collect it. For example, don't ask for 16 categories of income level if all you need to know ultimately is if they live below or above the poverty line.**
- Consider how you will use the information to intervene and make decisions. For example if you will intervene differently with women than with men, make sure you collect gender information. Also be sure to survey enough respondents within each stratification to produce statistically reliable data.**
- Once collected, check to see how closely the demographics of the study population matches that of the larger population from which the survey sample was drawn to determine if you can generalize your findings to the larger population.**

Formatting a survey

- Give the survey a title, which concisely reflects the content of the survey instrument (usually easier to do after the survey is designed).**
- Write an introduction to the survey that includes:**
 - 1.) **the purpose of the survey**
 - 2.) **how you will use the survey findings**
 - 3.) **a statement assuring confidentiality**
 - 4.) **the approximate time it will take to complete the survey**
- Organize questions in the survey according to topic area. Use headings to label each different category of questions.**
- Number all questions and responses. It will make it much easier to analyze your data once the surveys come back.**
- To increase comfort and confidence, start the survey with a question that is clearly related to the subject matter and easy to answer.**
- Put sensitive or challenging questions at the end of the survey. Respondents are more likely to answer them after they have made an investment in filling out the survey. "Knowledge" questions are usually least sensitive and "behavior" questions most sensitive.**
- Do not break questions between pages.**

- Allow survey participants at least one open-ended question at the end of the survey to comment on anything you did or did not ask them.**
- Include demographic information at the end of the survey, especially when asking about potentially sensitive items.**
- Thank respondents for their participation.**

Mail-out, phone, on-line, or in-person surveys

Use the following table to weigh the pros and cons of each.

	Mail-out or On-line Surveys	Telephone Interviews	Face-to-face interviews
Cost	\$	\$\$	\$\$\$
Questions	<ul style="list-style-type: none"> ▪ Must be carefully worded to maximize clarity and minimize ▪ Can ask more complex questions or questions with more responses 	<ul style="list-style-type: none"> ▪ Reduces the number of skipped questions ▪ Not appropriate for complex questions ▪ Less appropriate for sensitive questions 	<ul style="list-style-type: none"> ▪ Best method for enlisting the cooperation of respondents in answering questions
Responses	<ul style="list-style-type: none"> ▪ Respondents have time to give thoughtful answers ▪ Respondents may not answer all questions ▪ Potential for high non-response rate ▪ Confidentiality is an issue in on-line surveys 	<ul style="list-style-type: none"> ▪ Limited to 3 to 4 possible responses per question ▪ Conducive to using open-ended questions 	<ul style="list-style-type: none"> ▪ Interviewer can determine if subject is having difficulty answering questions ▪ Attributes of interviewer may affect responses
Time	<ul style="list-style-type: none"> ▪ Time required to program on-line survey or prepare written survey for mailing and follow-up 	<ul style="list-style-type: none"> ▪ Time required to train interviewers and make phone calls 	<ul style="list-style-type: none"> ▪ Time required to train interviewers and allow for travel to individual homes or other locations
Sampling	<ul style="list-style-type: none"> ▪ Due to high non-response rates for mail-out surveys, they should be sent to four times the number needed ▪ It is difficult calculate the response rates of on-line surveys 	<ul style="list-style-type: none"> ▪ All numbers aren't listed ▪ Need to get the right person on the phone ▪ May have to call more than once ▪ Massive sale solicitation efforts diminish interest 	<ul style="list-style-type: none"> ▪ Sample size can easily be augmented by extending the invitation to other qualified individuals

Choosing the right sample size

- Decide who will be included and who will be excluded from your survey.**
- Decide how much confidence you need in your survey findings, i.e. how much certainty you will need for decision-making. Generally, you will want no less than 90 percent confidence; the usual is 95 percent.**
- Determine the size of the population from which you will be taking your sample. Using the population size, consult a statistical sampling table to determine the sample size you will need to achieve the confidence level you have chosen. Remember that this is the number of completed surveys you will need to secure from qualified respondents – not the number of surveys to send out.**
- If the total population being surveyed is 50 or less, survey everyone.**
- Use random (probability) sampling whenever possible while at the same time trying to maintain your ideal demographic distribution. It reduces bias by giving everyone the same chance of being chosen. You can use a random digit table or computerized list to help you randomly select participants.**
- Bigger is not always better. It is better to actively pursue the selected random sample through follow-up phone calls and other forms of badgering rather than to expand your sampling pool.**
- Use non-probability sampling when it is unreasonable to collect a random sample. Some of the ways to collect a non-random sample include:**
 - **Intercepting every “3rd” or “20th” or “Xth” person at a public event**
 - **Surveying everyone who comes in the door that meets your criteria up to a certain quota**
 - **Using a snowball approach, i.e. initial respondents refer you to other respondents who refer you to others who refer to others, etc.**
 - **Conducting a convenience survey in an environment frequented by the type of respondent you want to survey**
- Try to avoid non-response bias, i.e. try not to exclude any desired subgroup from your survey because of the way your survey is designed or conducted. For example, an on-line survey may inadvertently exclude some people you want to hear from but who do not have a computer. The same thing could happen with a survey written at a very high literacy level.**