

How to Design a Survey

Christopher Peters

<https://zapier.com/learn/forms-surveys/design-analyze-survey/>

1. How to Design a Survey
2. The Best Survey Question and Answer Styles
3. How to Phrase Survey Questions and Answers

1. How to Design a Survey

Before creating a survey, it's important to think about its purpose.

Write down specific knowledge you'd like to gain from your survey, along with a couple of simple questions you think might answer your hypotheses (including the set of possible answers).

Market Research Survey - Social Media

Goal: To determine which social media channels to devote resources to.

Hypothesis: Most (>50%) of our customers use Facebook weekly.

Hypothesis: Very few of our customers use LinkedIn weekly.

Hypothesis: Our customers are adopting Snapchat faster than any other service. (Let's ask Q1 monthly)

Next to the answers, write down the percentage of responses you'd expect in each bucket—comparing the future results against these guesses will reveal where your intuition is strong and where blind-spots exist.

Question 1: Do you use Facebook weekly?

A: Yes (60-70%)
No (30-40%)

Question 1 (revised): Please check which services you use weekly:

Randomize if possible:

<input type="checkbox"/>	Facebook	(checked 60-70%)
<input type="checkbox"/>	LinkedIn	<5%
<input type="checkbox"/>	Snapchat	<5%
<input type="checkbox"/>	Twitter	20-30%
<input type="checkbox"/>	Something Else:	

↖ 30%

This pre-survey process will also help you synthesize the important aspects of

the survey and guide your design process. Remember: As the scope of your survey widens, fewer people are likely to respond, making it more difficult for stakeholders to act on results. Simplicity is probably the most important—and most under-appreciated—survey design feature.

2. The Best Survey Question and Answer Styles

The way you structure questions and answers will define the limits of analysis that are available to you when summarizing results. These limits can make or break your ability to gain insights about your key questions. So it's important to think about how you'll summarize the response to questions as you design them—not afterwards.

There are four main question and answer styles, and therefore four main response data types:

- Categorical - Unordered labels like colors or brand names; also known as "nominal"
- Ordinal - Likert scales like "strongly disagree to strongly agree" or "never to often"
- ~~Interval - Ranges like "number of employee"~~ ←
- ~~Ratio - Numbers like inches of rain~~ ←

Don't worry about these two types for your survey for this class.

See page 5 of this PDF for a handy mnemonic for remembering Categorical versus Ordinal items/data.

Survey apps provide a wide range of data-collection tools, but every data type falls into at least one of these four buckets.

Categorical Data

The categorical type of data uses specific names or labels as the possible set of answers. For example:

What do you like (most / least) about our product?

- *Fast customer service*
- *Ease of use*

- *Quality*
- *Quantity*

Categorical data is sometimes referred to as "nominal" data, and it's a popular route for survey questions. Categorical data is the easiest type of data to analyze because you're limited to calculating the share of responses in each category. Collect, count, divide and you're done.

However, categorical data can't answer "How much?" type questions, such as "How much do you value the speed of customer service?"

If you're not sure which dimensions are important (e.g. customer service, ease of use, etc.), start with a categorical question—they're more compact than the other question types, and can help your survey stay focused. Then, in a follow-up survey, you can ask "How much?" It's better to send out a few rounds of improving surveys than a huge blast that misses the mark.

Sampling is your friend. Consider dividing your sample group so that you can send multiple successive surveys as you learn more about your respondents.

Ordinal Data

Once you've identified categories of importance, asking ordinal style questions can help you assess that "How much?" type question. The ordinal response type presents answers that make sense as an order.

Never	Rarely	Sometimes	Often	Always
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Not important	Somewhat important	Neutral	Important	Very Important

If you're wondering, order can matter! Researchers at the University of Michigan's Institute for Social Research found that the order in which answers like these were read to respondents [determined how they answered](#).

A good way to remember the difference between Categorical and Ordinal items and their data is to remember that

Categorical - unordered [CATEGORIES] like colors or brand names; also known as “nominal”

Ordinal - [ORDERED labels as in] Likert scales like “strongly disagree to strongly agree” or “never to often”

Or put more simply:

Categorical - unordered CATEGORIES

Ordinal - ORDERED labels/categories

Therefore, items such as “Choose your favorite color” with response options such as Red, Green, Blue, Yellow, Purple, etc provide Categorical data because the colors are categories. Similarly, items such as “Choose your favorite airline” with response options such as Delta Airlines, United Airlines, American Airlines, Southwest Airlines, Jet Blue, etc provide Categorical data because the airline brand names are categories.

In contrast, items such as “Red is an ugly color” or “Southwest Airlines is a great airline” with response options on a Likert Scale from “Strongly Agree to Strongly Disagree” provide Ordinal data because the response options are in an ordered list (Strongly Agree, Somewhat Agree, Neither Agree nor Disagree, Disagree, Strongly Disagree).

Categorical - unordered CATEGORIES

Ordinal - ORDERED labels/categories

' . How to Phrase Survey Questions and Answers

Avoid leading questions

It's easy to accidentally suggest a certain answer in your question—like a hidden psychological nudge that says “hey, pick that one!”

Imagine that you're taking a poll on your local newspaper's website. It asks “Would you support putting a waste management facility next to the town square if it was privately or publicly funded?”

A. Privately funded

B. Publicly funded

But what if you don't want to build a waste management facility next to the town square? The smell of garbage lofting through the air probably *won't* encourage people to visit your city. The survey only gives us two options, though: build it with private funding, or build it with public funding.

Without a “neither” option, you can't capture how every respondent truly feels. The question in the example assumes a piece of information that the respondent didn't agree on. The fancy word for that is “presupposition.”

It's perfectly fine to ask questions like "How useful do you consider Product XYZ?", as long as the answer "Not at all" is included as an option. The key thing to avoid is "presuppositions."

Presuppositions are an artifact of your own cultural sphere; you probably won't even recognize when you're including them in questions. The best way to avoid this is to send your survey to a few people in your target audience who you think would disagree with you on the topic. Soliciting feedback from a diverse audience can help you squash presuppositions and avoid creating a bias feedback-loop in your results.

Allow for Neutral or NA Responses

It's hard to cover all of the possible ways a person might feel about a question. When you force a respondent to give an answer, it can pollute your data with non-responses masquerading as real answers. At first it may seem undesirable to let respondents off the hook, but doing so can improve the quality of your data.

Avoid Compound Questions

If I asked:

On a scale of 1-100 rate the following statement(s):

- Zapier and its blog posts help me do my job.

You would be forced to give a single answer reflecting feelings about both Zapier and its blog. This is sometimes called a "double-barrel question," and it can cause respondents to choose the subject they feel most strongly about. These cases can lead you to falsely interpret the results. It may also be possible that respondents have opposing views about both subjects. In that case, you're sure to collect misleading results.

Split the questions like these into multiple questions. Remember: Keep your questions as short and direct as possible.

Use Simple Language

Cleverness, humor, and [business jargon](#) can confuse respondents, especially if it causes them to misinterpret the question you're asking. Intentionally or not, we tend to write questions using ourselves and our cultural experiences as a reference, which can lead to poorly phrased copy that could confuse people. Using simple language can reduce the risk that the data you collect does not reflect the respondent's meaning.