



COMMON SURVEY DESIGN MISSTEPS (AND HOW TO FIX THEM!)

Crafting Equity-Minded Surveys and Maximizing Response Rates

Introduction

Surveys are one of many different types of tools for capturing a great deal of information to answer questions and solve problems. However, while surveys may appear easy to develop on the surface, the creation of surveys that effectively answer questions and seed solutions requires intentionality and thoughtfulness. Oftentimes, hastily constructed surveys can result in information that is not useful, wasting researchers' and survey-takers' valuable time and effort.

There are many resources devoted to good survey design, and we recommend that researchers who may be new to the topic spend time learning more about the nuances of good survey question development. This guide is designed for institutional research, planning, and effectiveness (IRPE) professionals—who are often tasked to develop, administer, and analyze surveys—to use as a quick overview of common survey design missteps and proposed methods on how one can avoid unusable data due to these easily avoidable issues. For our non-IRPE colleagues, we hope you will also find this guide useful should you find yourself developing, reviewing, or analyzing surveys!

This guide begins with 10 common survey missteps, why they are potentially problematic, and potential solutions. It concludes by sharing some other factors to consider that could influence survey responses and some equity-minded survey design tips.



10 Common Survey Item Construction Missteps (and How to Fix Them!)

Misstep	Example	What is the problem?	What are possible solutions?
<p>1. Double-barreled questions (...and triple and quadruple):</p> <p>A single question that actually asks about two (or more) different attributes</p>	<p>How much do you agree or disagree with the following statement?</p> <p><i>My college provides me with the information and support I need to navigate my transfer path.</i></p>	<p>A participant may not know how to answer if they feel one way about one part of the question and another way about another. In the given example, what if their college provides them with <u>information</u> to navigate their transfer path but does not provide them with <u>support</u>?</p>	<p><i>Split it out into two questions</i></p> <p>Revised Question:</p> <p>How much do you agree or disagree with each of the following:</p> <p>(A) My college provides me with the information I need to navigate my transfer path.</p> <p>(B) My college provides me with the support I need to navigate my transfer path.</p>
<p>2. Non-mutually exclusive response categories:</p> <p>When an answer can fall into more than one response category</p>	<p>How old are you?</p> <ul style="list-style-type: none"> • Under 18 • 18-20 • 20-25 • Over 25 	<p>Participants can struggle to answer, and you will get bad data if their answer could fall into more than one of the survey response options. In the example, what if the respondent is age 20?</p>	<p><i>Ensure options are mutually exclusive</i></p> <p>Revised Question:</p> <p>How old are you?</p> <ul style="list-style-type: none"> • Under 18 • 18-20 • 21-25 • Over 25
<p>3. Non-all- encompassing questions:</p> <p>When an answer is not present in any response category</p>	<p>How old are you?</p> <ul style="list-style-type: none"> • 18-20 • 21-30 • Over 30 	<p>Participants can struggle to answer, and you will get bad data if their answer is not an available response option.</p> <p>In the given example, what if the respondent is 17?</p>	<p><i>Ensure options are all-encompassing</i></p> <p>Revised Question:</p> <p>How old are you?</p> <ul style="list-style-type: none"> • Under 18 • 18-20 • 21-30 • Over 30
<p>4. “Double negative” questions:</p> <p>Questions with two negative words or phrases in a sentence that cancel each other out</p>	<p>How much do you agree or disagree with the following statement?</p> <p><i>Faculty should not be required to hold office hours in person.</i></p>	<p>“Double negative” questions are confusing and can be misunderstood, as they require the respondent to think through two opposing constructs—something positive (agreement) with something negative (not happening).</p> <p>In the given example, if the respondent disagrees, they are saying they do not think faculty should not be required to hold office hours in person (in other words, they think faculty should be required to hold office hours in person).</p>	<p><i>Frame questions in the positive direction</i></p> <p>Revised Question:</p> <p>How much do you agree or disagree with the following statement?</p> <ul style="list-style-type: none"> • Faculty should be required to hold office hours in person.
<p>5. Questions without a baseline:</p> <p>Questions with wording that does not allow researchers to determine the direction of the effect they are trying to measure</p>	<p>How much do you agree or disagree with the following statement?</p> <p><i>The MESA program influenced my desire to pursue a career in STEM.</i></p> <ul style="list-style-type: none"> • Completely Disagree • Mostly Disagree • Slightly Disagree • Slightly Agree • Mostly Agree • Completely Agree 	<p>Lack of a baseline or direction of effect makes it difficult to infer anything from the question. In this example, consider the following scenarios:</p> <ul style="list-style-type: none"> • The program could have strongly influenced the respondent <u>not to</u> pursue a career in STEM, in which case they would select “Completely Agree.” • The program could have strongly influenced the respondent <u>to</u> pursue a career in STEM, in which case they would also select “Completely Agree.” • A respondent may have already decided on a STEM career before entering the program and the program did not change that, so they might select “Completely Disagree,” but that response would likely be misinterpreted as the respondent seeing the program as ineffective. 	<p><i>Split the question into two parts to capture change over time</i></p> <p>(1a) Before participating in the MESA program, how interested were you in pursuing a career in STEM?</p> <ul style="list-style-type: none"> • 1=Not at all interested • 6=Extremely interested <p>(1b) After participating in the MESA program, how interested are you in pursuing a career in STEM?</p> <ul style="list-style-type: none"> • 1=Not at all interested • 6=Extremely interested

Misstep	Example	What is the problem?	What are possible solutions?
6. Undefined acronyms	<p>Which of the following would you be interested in receiving more PD on?</p> <ul style="list-style-type: none"> <input type="checkbox"/> Helping students with FAFSA completion <input type="checkbox"/> Developing DEI competencies of faculty to support AAPI students <input type="checkbox"/> Working collaboratively with IRPE offices 	<p>It is tempting to use acronyms to save space. However, if a participant does not know a given acronym, they may not select an option they would have otherwise selected if they knew what the acronym meant.</p>	<p>Spell out all acronyms the first time they are used (and avoid them all together if they are not used more than once!)</p> <p>Which of the following would you be interested in receiving more Professional Development on?</p> <ul style="list-style-type: none"> <input type="checkbox"/> Helping students with Free Application for Federal Student Aid (FAFSA) form completion <input type="checkbox"/> Developing diversity, equity, and inclusion (DEI) competencies of faculty to support Asian American Pacific Islander (AAPI) students <input type="checkbox"/> Working collaboratively with institutional research, planning, and effectiveness (IRPE) offices
7. Too much jargon	<p>How strongly do you agree or disagree with the following statement?</p> <p><i>My college demonstrates its commitment to equitable student success via the intentional implementation of a broad range of inclusive practices.</i></p> <ul style="list-style-type: none"> • Strongly Agree • Agree • Somewhat Agree • Somewhat Disagree • Disagree • Strongly Disagree 	<p>When survey creators are well-versed in the field about which the survey is designed, they may fail to consider the audience's level of knowledge and comfort with various terms. Surveys should always be as direct as possible in what they are asking. There are many free "Readability Calculators" available online (e.g., Readability Analyzer).</p>	<p>Use more commonly used terminology</p> <p><i>How strongly do you agree or disagree with the following statement? My college does many different things to make sure all students feel included on campus.</i></p> <ul style="list-style-type: none"> • Strongly Agree • Agree • Somewhat Agree • Somewhat Disagree • Disagree • Strongly Disagree
8. Leading questions: Questions that suggest a certain answer to the person or that a given answer is desirable	<p>Most students prefer in-person over virtual instruction. Do you agree?</p> <ul style="list-style-type: none"> • Yes • No 	<p>The language introduces a cognitive bias before asking the question, which can lead to a response driven by social desirability. In other words, you have already signaled to the respondent your preferred answer.</p>	<p>Phrase in an unbiased manner</p> <p>Which type of instruction do you prefer?</p> <ul style="list-style-type: none"> • In-person • Virtual
9. Unbalanced rating scales: When there are not an equal number of positively and negatively valenced questions, inherently skewing responses in one direction	<p>How strongly do you agree or disagree with the following statement?</p> <p><i>The campus has food options that meet my dietary needs.</i></p> <ul style="list-style-type: none"> • Strongly Agree • Agree • Somewhat Agree • Slightly Agree • Disagree • Strongly Disagree 	<p>The response options are biasing responses toward the positive.</p> <p>In this example, even if someone is picking the fourth option (Slightly Agree) on the six-point scale, they are responding in the positive. In the case of dichotomous scales (e.g., agree/disagree, satisfied/dissatisfied), you need to have the same number of options on each side of the scale.</p>	<p>Balance your scales</p> <p>How strongly do you agree or disagree with the following statement?</p> <p><i>The campus has food options that meet my dietary needs.</i></p> <ul style="list-style-type: none"> • Strongly Agree • Somewhat Agree • Somewhat Disagree • Strongly Disagree
10. Use of "neutral" in a Likert scale	<p>How much do you agree with the following statement?</p> <p><i>Student Senate is important to a well-functioning campus.</i></p> <ul style="list-style-type: none"> • Completely Disagree • Mostly Disagree • Neutral • Mostly Agree • Completely Agree 	<p>A neutral point could reflect any of these scenarios (among others):</p> <ul style="list-style-type: none"> • I feel ambivalent about the issue and could go either way. • I don't have an opinion about the issue due to a lack of knowledge or experience. • I don't want to give my real opinion if it is not considered socially desirable. 	<p>Consider adding alternative Likert-scale options (e.g., don't know, not applicable)</p> <p>These options help disentangle a lack of experience or knowledge from the "neutral" response. Additionally, this option is often listed outside the scale, assigned a zero or null value, and not included in the calculation of the mean/average.</p> <p>How much do you agree with the following statement?</p> <p><i>Student Senate is important to a well-functioning campus.</i></p> <ul style="list-style-type: none"> • Completely Disagree • Mostly Disagree • Mostly Agree • Completely Agree • Don't Know/Not Applicable

But Wait, There's More!

As we mentioned in the introduction, an entire book could be devoted to good survey design. While we have your attention, here are a few more pieces of information we hope you find useful when designing your next survey.

Factors That Influence Survey Responses

When designing a survey, there are numerous factors to consider that may influence how individuals respond. These factors include **survey length, the order of questions, the level of invasiveness of questions, and the use of required questions.**



Survey length: While there are times when a longer survey is necessary, always try to make your surveys as succinct as possible. Long surveys will inherently have more fall-off due to survey fatigue, meaning that questions later in the survey may have fewer or no responses. The inclusion of a progress bar at the bottom of the survey can be helpful to give participants a sense of how much they have left instead of feeling that the survey is endless.



Order of questions: In almost all surveys, there is participant drop-off as respondents move through the survey. Consider using the option available in certain online survey tools to randomize groups of questions to ensure no question or set of questions winds up having a much lower completion rate than others due to typical survey fall-off patterns. That being said, randomizing every single question can lead to a survey feeling very disjointed. As such, consider randomizing at the page level (sets of questions that hang together) instead of at the individual question level. If randomization is not an option, present questions in priority order—in other words, put the questions you most want answered first.



Overly invasive and/or triggering questions: Only ask what you really need to know, and ensure the participants know why you need this information. Overly invasive or triggering questions can be off-putting and lead respondents to stop completing the survey altogether. If a survey question may be at all triggering, include a disclaimer before the question letting the reader know about the general topic of the upcoming survey question. Examples of overly invasive and/or triggering topics may include questions regarding mental health, sexual practices, finances, abuse, and criminal history.



Requiring questions: Many survey design tools allow you to require respondents to answer specific questions before they can move forward in the survey. *Research* has demonstrated that when asked personal questions, 35% of respondents drop out of a survey when required to answer vs. 9% when allowed to skip. Unless the answer to a given question is necessary, make all questions optional. Examples of when required questions may be necessary include:

- Consent to participate in the study/survey;
- Questions that impact the branching to subsequent questions; and/or
- Variables that are critical to how one will analyze the data (e.g., race/ethnicity in a study focused on racial/ethnic differences).

Generally speaking, it is best practice to begin each survey with an introduction that is not overly lengthy but gives the survey-taker a clear picture of what they can expect. Such introductions should include the following information:

- Rationale for the research;
- General sense of the topics to be covered;
- How long it will take to complete;
- Whether responses will be anonymous, confidential, or otherwise;
- Who will have access to the data;
- How the data will be used and protected; and
- Whom they can contact with questions or concerns.

Considering Equity at Every Phase of the Survey Process

Most survey creators have a goal of receiving a large and diverse enough response that they can feel confident in the generalizability of survey findings. Further, having a diverse survey sample can ensure survey creators are able to analyze their data through an equity lens by disaggregating the data for key groups to ensure the conclusions being drawn are not biased towards a sub-sample of the population. An equity-centered survey considers equity not only in its item construction process but also in its survey administration and data analysis processes. An equity-centered survey takes active steps to minimize barriers to access based on a respondent's ability, language, or technological access.

As such, we recommend the following tips for considering equity in all stages of survey work to help maximize the likelihood of ending up with a data set that is inclusive and representative of the general population. The sections below outline how equity can be considered during both survey item construction and administration.

EQUITY IN SURVEY ITEM CONSTRUCTION

Most equity-minded surveys include a robust demographics section such that data can be analyzed in a way that considers the diverse experiences of different groups of respondents. How these demographic questions are asked can influence whether a survey respondent feels seen.

Consider the following when crafting questions about participant demographics:
Include an inclusive demographics section, avoid "othering," alphabetize lists, and do not conflate gender, sex, and sexual orientation.



Include an inclusive demographics section: Offer individuals the space to share their identities in multiple ways, even within a given demographic category. Make demographic questions regarding race/ethnicity, gender, and sexuality check boxes instead of radio buttons (i.e., "check all that apply" vs. restricted to choosing only one option) or open-ended text boxes. Even if your attempts to be as inclusive as possible are robust, space should always be allowed to capture respondents' unique identities.

✔ **Avoid “Othering:”** Be as inclusive as possible in the options for a given demographic category, and be as thoughtful as possible in naming your “Other” box. Whenever possible, we suggest not using the term “Other” or any term that implies a hierarchy or preference relative to the named items in the list. Instead, we recommend using more inclusive language to capture information (e.g., prefer to self-describe, none of the above). Even if you plan to group data into higher-level categories for your analyses, ensure you provide the opportunity for respondents to see themselves in your questions about their demographic characteristics (race, gender, etc.).

✔ **Alphabetize:** List options in alphabetical order to avoid any inference that one option is preferable/dominant over another.

✔ **Do not conflate gender, sex, and sexual orientation:** Questions about respondents’ sex, gender, sexual orientation, and transgender status should be completely separate questions. When it comes to gender and transgender status, there should be one question asking about their gender identity and another asking if they identify as transgender, as transgender women are women, and transgender men are men. They should not need to choose one or the other in a question about gender.

✔ Lastly, **Do not go it alone!** It is important to recognize that oftentimes, those developing a survey may not be a member of the demographic group taking the survey (e.g., college employees designing a survey for students, White researchers asking about the experiences of BIPOC students). While a question may seem straightforward on the surface, most people would be surprised to learn that the interpretation of a question can vary depending on who is answering it. Further, implicit biases may impact not only which questions are asked on a survey but also how those questions are worded. While it may be more time- and labor-intensive, consider using one of the following survey design practices to ensure you are asking what you think you are asking and minimizing potential implicit biases:

1. **Request feedback from focus population**



- a. Ask a small sample of individuals from your target population to take your survey and provide written feedback.
- b. Implementing **cognitive interviewing**—this process is more thorough than asking for written feedback. Cognitive interviewing is when the researcher has a small sample of participants with the characteristics of the survey population read the survey aloud and talk through their thought process when interpreting and answering each question. While this process requires more time from both the survey designer and sample respondents, it is incredibly thorough and helps ensure your questions are being interpreted the way you want them to be.

2. **Pre-test survey:** Administer the survey to a small sample of the population that will ultimately be surveyed and then analyze whether participants are skipping certain questions or if responses or response patterns look significantly different from what you expected.



EQUITY IN SURVEY ADMINISTRATION

For a survey to be equitable, it must be broadly accessible to ensure you maximize the number of people who are able to respond to the survey.

The following are three considerations for maximizing accessibility in service administration: **ensure survey translation considers the context of questions, consider accessibility when considering question design, and, whenever possible, recognize the bias in surveys only administered online.**



Ensure Translation Services Consider Context: If translating a survey into another language, ensure the translation is picking up on the context of the question. Using automatic translation services (e.g., Google Translate) can often lead to incorrect or ineffective survey translation. Consider leveraging a person familiar with the survey topics to aid in translation or, at minimum, review the translation.



Consider Accessibility in Question Design: When considering online survey accessibility, note that screen readers are not able to appropriately read certain question types (notably matrix questions). As such, you may need to parse out a question that would traditionally be streamlined in a matrix into multiple separate questions.



Acknowledge Bias in Survey Administration Practices: Recognize that anytime you administer an online survey, you are inherently limiting your responses to a subset of the population that has access to the internet. Whenever possible, it is best practice to offer surveys in a paper/pencil format in addition to the online version.

It can never hurt to remind yourself about your own implicit biases and positionality. We recommend checking [*Project Implicit*](#) to help you examine some of your own potential implicit biases throughout the survey process. Reminding yourself of such biases and inherent positionality before launching into survey work (from design through analysis) in and of itself can help reduce bias.

FOR ADDITIONAL RESOURCES OR CONSIDERATIONS IN SURVEY DESIGN, WE RECOMMEND:

- [*Equity & Inclusion in Accessible Survey Design*](#)
- [*The Pew Research Center's "Writing Survey Questions"*](#) and their video on [*Methods 101: Question Wording*](#)
- [*Researcher Positionality - A Consideration of Its Influence and Place in Qualitative Research - A New Researcher Guide*](#)