

Do's and Don'ts in Survey Design and Reporting

Survey Design



ASSOCIATION FOR INSTITUTIONAL RESEARCH
Data and Decisions for Higher Education

Welcome to AIR's webinar series – thank you for attending! Today's webinar is the first of two webinars focused on survey research.

Presented by:



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My name is Darlena Jones and I am the Director of Assessment and Research for the association. I direct the assessment and research initiatives for AIR like the Forum, membership, and contract and grant funded services such as IPEDS and the National Data Institute. I also lead the development of new educational opportunities for AIR. In addition, I lead the National Survey of IR Offices project that quantifies the operations of the IR Office.

Before joining AIR, I was the Director of Education and Program Development for a for-profit assessment company where I led the national benchmarking assessment division. In that role, I developed and managed over 100 national benchmarking assessment projects.

How does that related to this webinar series? I have spent the past 20 years conducting survey research projects and writing national benchmarking assessments which collected nearly a million responses each year. But, when I started in that role, I was a novice survey author and made a lot of mistakes. This webinar will help you avoid the mistakes I made.

Housekeeping

We welcome questions! Please use the “Questions” section of the GoToWebinar control panel.

Slides available in the “Handouts” section and on the National Survey’s webpage (www.airweb.org/NationalSurvey)

Webinar is being recorded and will be available

Please respond to the evaluation when you receive it via email. We appreciate your feedback!



Before we begin, we have a few housekeeping items to discuss. First, your microphone will stay muted throughout the webinar but if you would like to ask me a question, please type your question into the “Questions” section of the GoToWebinar control panel and click “Send”. I will receive those questions and answer as we time.

Second, if you would like a copy of the slides, please click on the “Handouts” section of the GoToWebinar control panel and download the file.

Next, this webinar is being recorded and will be made available.

And, finally, at the end of this webinar, you will receive an email to a short survey asking for feedback about the webinar.

First in a Two-Part Webinar Series

Webinar 1:

Survey Instrument Design

» October 8, 2019

Webinar 2:

Reporting Survey Data

» October 15, 2019



We developed this two-part webinar series to help you improve the quality and reporting of survey data for decision making. Today's webinar focuses on the survey instrument design while next week's webinar looks at ways to report survey data more effectively.

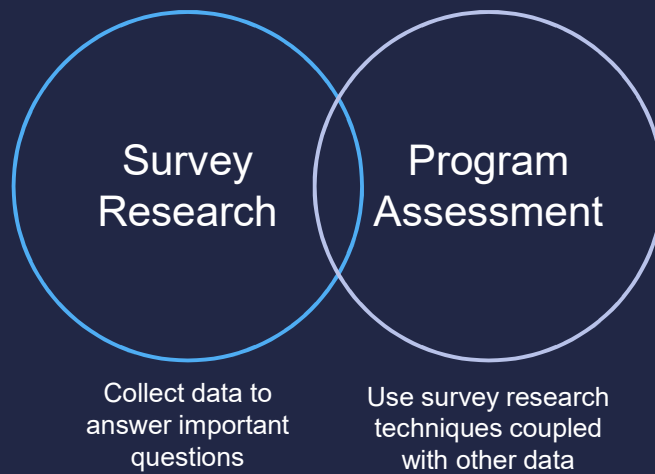
Why Worry About Survey Design?



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Why do we need to go to all this trouble to write good survey questions? The answer is pretty simple – bad survey items leads to bad data collection. And, any decision made on poor quality data must be suspect. So, if we're committed to a data-informed decision culture, we must also be committed to high quality data instruments.

Why Survey Research?



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Survey research is one of the most important areas of measurement in applied social science.

People conduct survey research for many reasons like understanding behaviors, attitudes, opinions. But all surveys start with one common mission: collect data to help answer an important question that available data can't address. And, as survey researchers, it is our responsibility to guarantee that our surveys are well constructed and gather valuable information for decision making.

Program assessment often uses survey research techniques to collect data in areas like indirect measures of student learning, faculty satisfaction, and alumni participation.

Do's and Don'ts for Specific Question Types



Now, let's start our “do's and don'ts” conversation that apply to specific survey question types.

Likert-Scaled Questions

- Answer options are on a continuum scale
- Between 3 and 11 answer options – 5 and 7 options are most common
- Odd-numbered response options – allow for a “neutral” response

Please indicate your level of agreement. I am comfortable seeking help for the following issues:

	Strongly disagree	Moderately disagree	Neutral	Moderately agree	Strongly agree
Academic issues (e.g., performing poorly in classes, need tutoring)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Financial issues (e.g., difficulty paying for tuition, housing, food)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Health issues (e.g., mental or physical health)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Off-campus housing issues (e.g., finding housing, help with landlord issues)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>



A Likert-scaled question is one in which the response options follow a scale or continuum with anchor points at each end of the scale like very dissatisfied to very satisfied. The most popular type of scaled response is the Likert Scale which allows us to measure both positive and negative values and intensity of responses.

There is some debate on how many response options is appropriate but it's understood that scales should have between 3 and 11 options.

Unless your research project requires you to force your respondent to choose a positive or negative side, consider using an odd-numbered scale with a middle neutral option. This allows the “fence sitters” a response option that mirrors their perspective. In this set of questions, we selected a 5-point scale with a neutral option. In this context, a neutral option might be selected if a student is neither comfortable or uncomfortable seeking help.

Likert-Scaled Questions (continued)

- Even-numbered response options force respondent to pick sides.
- Must be confident that everyone can have a positive or negative opinion.

Please indicate your level of agreement. I am comfortable seeking help for the following issues:

	Strongly disagree	Moderately disagree	Moderately agree	Strongly agree
Academic issues (e.g., performing poorly in classes, need tutoring)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Financial issues (e.g., difficulty paying for tuition, housing, food)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Health issues (e.g., mental or physical health)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Off-campus housing issues (e.g., finding housing, help with landlord issues)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

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If we want to force our respondents to choose sides (either positive or negative side), then we shouldn't include a middle neutral answer option. In this set of survey questions, respondents are forced to state if they are, or aren't, comfortable seeking help. But, be careful with even-numbered scales; you must be confident that everyone can have a positive or negative opinion.

Likert-Scaled Questions (continued)

- Include a “not applicable” option if items might not pertain to the respondent
- Not applicable ≠ Neutral

Should the Student Union install the following stores/centers?						
	Strongly disagree	Moderately disagree	Neutral	Moderately agree	Strongly agree	Not applicable
Coffee Shop	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Daycare Center	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Bookstore	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

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In some cases, respondents can't answer a question. In those cases, consider adding an answer option of “not applicable” which is different than the middle neutral option. The neutral option means that a person has an opinion, but it's neither positive nor negative. Options like “not applicable” means that a person can't express an opinion because the respondent either lacks the knowledge, is undecided, has no experience with the topic, or the topic doesn't apply to them.

Here, we have drafted questions for a student union survey asking students if they would like these stores or centers installed in the Union. A respondent might select “not applicable” to the second question regarding a Daycare Center if the respondent doesn't have dependent children.

Use the same sized scale

How satisfied are you with the following services?					
	Very dissatisfied	Moderately dissatisfied	Neutral	Moderately satisfied	Very satisfied
Academic Advising	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Tutoring Services	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

How satisfied are you with the following services?							
	Very dissatisfied	Moderately dissatisfied	Slightly dissatisfied	Neutral	Slightly satisfied	Moderately satisfied	Very satisfied
Financial Aid	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Multicultural Services	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Counseling Center	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

→ Max value = 5

→ Max value = 7

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When using Likert-scaled survey questions, whatever size scale you choose (like a 5-point scale or a 7-point scale), use the same size throughout your survey. Why? When you compare results from questions across different sized scales, the comparison fails for a simple reason: A 5-point scale has a maximum value of a 5 while a 7-point scale has a maximum value of a 7. If we compare questions on both scales, it will appear that those measured on a 7-point scale rated higher when, in fact, it's been artificially created by the different sized scales.

In our example, we have two sets of questions: the first is measured using a 5-point scale while the second is measured using a 7-point scale. We can't compare means between satisfaction with academic advising and satisfaction with financial aid without scaling the data first.

Use a negative-to-positive scale

Negative-to-positive scale

How satisfied are you with the following services?

	Very dissatisfied	Moderately dissatisfied	Neutral	Moderately satisfied	Very satisfied
Academic Advising	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Tutoring Services	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>



Positive-to-negative scale

How satisfied are you with the following services?

	Very satisfied	Moderately satisfied	Neutral	Moderately dissatisfied	Very dissatisfied
Academic Advising	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Tutoring Services	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>



Left-side bias is stronger with positive-to-negative scale

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You may not have noticed that, in the examples used earlier, the first answer option was always the least desired response like “very dissatisfied” while the last answer option to the far right of the scale was the most desired response like “very satisfied”. This is a negative-to-positive oriented scale.

You could organize your scale from positive-to-negative but be aware of the “left-side bias” phenomena in survey research. Researchers have shown that respondents are slightly more likely to respond to options on the left-side of the scale especially when the scale is organized from positive to negative.

The solution? Organize your scales from negative to positive for a couple of reasons: First the left-side bias is less of an issue when the scale is negative-to-positive and second if your data is going to be inherently biased, it’s more defensible to be biased to the negative. In other words, it looks like you’re trying to game the system if you organize a positive-to-negative scale.

But, most importantly, whichever direction you choose (negative-to-positive or positive-to-negative), keep that same direction for the entirety of the survey to lessen confusion among your respondents.

Avoid reverse-scaled questions

To what degree is the following present at this institution?	Not at all	Slight	Moderate	High	Very high
Appropriate and inclusive language used in classes.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Respect by students for other students of different racial/ethnic backgrounds.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Racial/ethnic separation on campus.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Positive response

Reversed-Scale Question

Negative response



Let's say that our Dean of Students asked us to write a survey to study campus climate. We drafted these questions and used a 5-point extent scale (not at all, slight, moderate, high, very high). This scale works for the first two questions since "not at all" is the negative response to appropriate and inclusive language and respect for other students while "very high" is the positive response.

But the scale fails for the third question: the response option, "not at all", to the question of racial/ethnic separation on campus is the positive, or desired, response while "very high" is the negative, or least desired, response. This is an example of a "reversed scale question". We strongly encourage you to avoid reverse-scaled questions if possible (with some work, you can usually reword a question so that it follows a negative-to-positive scale) but sometimes, like this case, it doesn't work.

Avoid reverse-scaled questions (cont.)

To what degree is the following present at this institution?	Not at all	Slight	Moderate	High	Very high
Appropriate and inclusive language used in classes.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Respect by students for other students of different racial/ethnic backgrounds.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Racial/ethnic separation on campus.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Not at all: Coded as 1, Slight: Coded as 2, Moderate: Coded as 3, High: Coded as 4, Very high: Coded as 5

OR

To what degree is the following present at this institution?	Not at all	Slight	Moderate	High	Very high
Appropriate and inclusive language used in classes.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Respect by students for other students of different racial/ethnic backgrounds.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

To what degree is the following present at this institution?	Very high	High	Moderate	Slight	Not at all
Racial/ethnic separation on campus.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

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There are a couple of solutions to this dilemma: One is to reverse score the data. We can keep the survey structured this way but we would have to reverse score the responses data since...

“Not at all” will be coded by the survey software as a 1, “Slight” as a 2, “Moderate” as a 3, “High” as a 4, and “Very high as a 5.”

To reverse score the reverse-scaled question, you would recode “Not at all” as a 5 down to “Very high. as a 1.

Or another solution is to reverse the survey scale for that last question so that the negative response option appears on the left side.

If I had to choose between these two, I would choose the second solution because of the left-side bias issue. We always want to ensure that we’re collecting authentic responses and not accidentally biasing our data.

Don't worry if scale has no inherent order

How important were the following items in deciding to live in on-campus apartments?

	Not important	Slightly important	Moderately important	Very important	Extremely important
Proximity to campus	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Friends live in apartments	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Cost	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Positive or negative?

Positive or negative?

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Sometimes you'll have situations where it's unclear which answer option is positive and which is negative. For example, let's say that our residence life department asked us to develop a study to determine why upperclassmen choose to live in on-campus apartments. We selected an "important" scale and drafted our survey questions.

In this case, is "not important" a negative or a positive response to the question, *"How important was proximity to campus in deciding to live in on-campus apartments?"*

Likewise, is "extremely important" a negative or a positive response? Here, there is no obvious negative or positive response. If you find yourself in this situation, I suggest you use a traditional negative-to-positive scale and allow the respondent and decision maker to interpret the scale within their context.

Categorical Questions

- Respondent chooses a single response option that fits best.
- Must include an exhaustive list of answer options.
- Include an “other” if unsure and allow respondent to specify “other.”
- If answer option list is long, organize them in a logical manner or break into two+ questions.

Which best describes the primary reason you did not return to this institution this term?

- ☐ Financial issues
- ☐ Transportation isn't reliable
- ☐ Family demands
- ☐ Health issues (mine or a family member)
- ☐ Job is too demanding
- ☐ Institution doesn't have my program of study
- ☒ Other

I want to attend school closer to home.

AR

Now, let's move on to another popular question type – the Categorical Question. These questions are often used to collect demographic information like gender or race. They're also used to collect data that can be organized in categories like our example shows.

In this example, we ask the respondent to identify the reason that best fits why they left our institution. Answer options include financial and health issues and a demanding job. This data would be valuable to those front-line faculty/staff to help mitigate an issue before it happens.

A categorical question asks the respondent to choose a single response option that best fits them or their situation.

The response options must be exhaustive which means that all possibilities must be offered.

If you're unsure that the list is exhaustive, include an “other” option that allows the respondent to type in an answer. Reviewing these “other” options during a pilot-test of your survey can help you determine other response options to include.

And, if your categorical question has a long list of response options, consider arranging them in a logical pattern or breaking the question into two questions to lessen the number of answer options per question.

Don't overlap answer options!

How old are you?

- ☐ Less than 18 years old
- ☐ 18 to 25 years old
- ☐ 25 to 30 years old
- ☐ Over 30 years old

How old are you?

- ☐ Less than 18 years old
- ☐ 18 to 25 years old
- ☐ 26 to 30 years old
- ☐ Over 30 years old



Tip: Carefully consider each answer option. Ask someone to proof the response options.

AR

Overlapping answer options is a very simple mistake to make. In this example, we ask students to indicate their age.

But, how should students respond if they're 25 years old? There are two answer options that work.

On the right side, we show the correct answer options. When developing complicated surveys, it's easy to make mistakes like this. Just remember to carefully consider each answer option. And have someone proof your response options.

Be Careful: Multiple-Response Questions

If you don't return to this institution next term, which of the following reasons might contribute? Please choose all that apply.

- ☒ Financial issues
- ☒ Transportation isn't reliable
- ☒ Family demands
- ☐ Health issues (mine or a family member)
- ☐ Job is too demanding
- ☒ Institution doesn't have degree program I want
- ☒ Significant other attends another institution
- ☒ Other

I want to attend a school closer to home

➤ Doesn't measure intensity

➤ Non-response bias

AR

Multiple response questions look like categorical questions except that the respondent can choose more than one answer option. The respondent is essentially answering each item with a “yes” or “no”. If they click an answer option, they’re effectively saying “yes” to that item, if they don’t click an answer option, they’re effectively saying “no”. Essentially, each answer option is a dichotomous question.

At face value, it might seem better to allow respondents to choose all applicable answer options but you should limit the use of this question type for a couple of reasons. First is that multiple-response questions don’t measure intensity of responses. In other words, a person could select all the reasons for leaving the institution but it’s likely there is one reason that’s most critical. Second, there’s the issue of non-response bias. Some respondents skip questions when answering a survey. In the case of a multiple-response question, a person can choose multiple options or no options at all. If they choose no options, are they really saying “no” to each answer option or did they skip that question? There’s no way to know for certain. This leads to under reporting the data since you must assume that they said “no” to every option.

Be Careful: Multiple-Response Questions

If you don't return to this institution next term, what would be the predominant reason?

- ☒ Financial issues
- ☐ Transportation isn't reliable
- ☐ Family demands
- ☐ Health issues (mine or a family member)
- ☐ Job is too demanding
- ☐ Institution doesn't have degree program I want
- ☐ Significant other attends another institution
- ☐ Other

➤ Change to a categorical?

➤ But, it doesn't measure impact of the other answer options

AR

We can fix the intensity and non-response bias by changing the multiple-response question into a categorical question and ask the respondent to choose the predominant reason for not returning. But, in this case, you lose the level of intensity of the other answer options that could contribute to student attrition.

Be Careful: Multiple-Response Questions

If you don't return to this institution next term, to what degree would the following reasons contribute?

	Not at all	Slightly	Moderately	High	Very high
Financial issues	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Transportation isn't reliable	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Family demands	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Health issues (mine or a family member)	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Job is too demanding	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Institution doesn't have degree program I want	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Significant other attends another institution	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>

What other reasons (besides those listed above) might contribute to you not returning next term?

I want to attend a school closer to home

» Consider changing to a Likert-scaled question

» Upside – measures intensity of each answer option

» Downside – more questions to answer

AR

In my opinion, the ideal situation is to write these items as Likert-scaled questions – “*If you don't return to this institution next term, to what degree would the following reasons contribute?*” We included a text box for other reasons. Now we can fully understand the impact of all potential issues on student attrition.

The downside is that this block of questions will take longer for the student to answer. But, if intensity doesn't matter, then use the multiple response or categorical question instead.

Be Careful: Ranking Questions



Please rank the club sports you want to participate in from your first to last choice.

Soccer	3	▼
Baseball / softball	1	▼
Basketball	4	▼
Rugby	5	▼
Volleyball	2	▼

- Can be confusing if there are too many items
- Doesn't measure intensity



Consider writing as a Likert-scaled question

To what degree would you be interested in participating in the following club sports next term?	Not at all	Slight	Moderate	High	Very high
Soccer	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Baseball / softball	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Basketball	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Rugby	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Volleyball	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>

AIR

Ranking questions ask respondents to put a list of things in order. Let's say you developed a survey for Recreation Services to measure the interest in participating in club sports. In a ranking question, the respondent must order the sports from high to low.

While ranking questions might seem attractive, they can be tricky to write and are often confusing for respondents especially if the list of options is long or the instructions are unclear.

Ranking questions also only reveal the order in which respondents would put things, but it does not measure the intensity of their preference. For example, how much stronger is their preference for baseball/softball over volleyball?

Instead of a ranking question, consider writing those items as a Likert-scaled question which makes it easy to measure the intensity of their response. Here, we see that this person rated baseball/softball and volleyball with the same intensity. And, we see that soccer is a close second. We don't get that level of intensity in a ranking question.

But, if intensity of response isn't necessary, and you're only interested in a rank, then use the ranking question.

Be Careful: Numeric Questions



	Numeric Answer
How old are you?	<input type="text" value="25"/>
How many dependent children do you have in your home?	<input type="text" value="2"/>
How many miles do you live from campus?	<input type="text" value="30"/>

- Respondent must follow the rules
- Can't use numeric data as a grouping variable



Consider writing as categorical questions

How old are you?

- ☐ Less than 18 years old
- ☐ 18 to 21 years old
- ☒ 22 to 25 years old
- ☐ 26 to 30 years old
- ☐ 31 to 40 years old
- ☐ 41 years old or older

AR

Numeric questions ask the participant to respond with a number like age, number of dependent children, or year they graduated from high school. Most survey software systems allow you to put in data checks that restrict the data that can be entered like a minimum and maximum value. For example, if you ask the participant their age you could set a minimum value of 15 and a maximum value of 95 which would prevent answers below 15 or above 95.

Some survey software systems allow for summing multiple numeric questions. For example, you could ask a staff member what percentage of their time is spent on various job functions and force those percentages to add to 100.

But, numeric question types can be challenging for a couple of reasons: First, the respondent must follow the rules. The survey system will ask them to redo the question if they don't answer it correctly like if they answer outside the parameters you sent or they fail to provide answers that sum to 100.

Second reason that numeric questions are challenging is on the analysis side. While you can perform arithmetic functions like mean and standard deviation on numeric data, you can't use those data as a grouping variable. Instead, you'll need to generate a new variable that creates groups within the numeric data to be used in analyses like cross-tabulations.

Unless you need the precision of numeric data, consider reframing numeric questions as categorical questions. In this example, we rewrote age as a categorical question. While we have lost the precision of the data, we have gained a variable that can now be used in grouping analyses and we've made it easier for the respondent.

Be Careful: Open-ended Questions



Why did you choose not to participate in a club sport this term?

I had knee surgery last summer and still recovering

- Don't ask broad "tell us what you think" questions – be specific
- Time-consuming for respondent
- Might have many responses to code



Consider reframing as a categorical question

What was the primary reason you chose not to participate in a club sport this term?

- ☐ Not enough time (course demands, work demands)
- ☐ There wasn't a sport offered that I was interested in
- ☒ I have an injury that prohibited me from playing
- ☐ I prefer other ways to exercise besides group sports
- ☐ Other

AR

Open-ended text questions allow the respondent to answer the question in their words. While this type of data can help explain answers from other questions like Likert-scaled or categorical, it can be very difficult and time-consuming to analyze.

If you use this question type, consider asking the respondent a focused question instead of a broad "tell us what you think" question. Let's say that, in our survey for Recreation Services, we wanted to know why students didn't participate this term so we drafted an open-ended text question to measure that. Notice that we asked the respondent a direct question and not just a blank comment box.

Keep in mind that answering this question is time-consuming for the respondent.

And, if the number of people you're surveying is large, you could end up having to read and categorize hundreds, if not thousands, of responses.

To mitigate that coding time and the burden on the respondent, consider reframing this question as a categorical. Here, we list the most obvious reasons why someone wouldn't participate in a club sport and gave them a text box to explain additional reasons.

Keep Some Questions Open-Ended

Allows the respondent to speak their mind



AR

While it's been my experience that, for most open-ended questions, you have a sense of the types of answers you'll receive, you should always keep some open-ended text questions on your survey. This allows the respondent to speak their mind. I have often seen respondents ignore the question prompt completely and, instead, use that space to tell you something that's an issue for them – something you might not even know was a problem.

Questions & Discussion



Let's pause to answer some questions. As people are formulating their questions, if they any, I'm going to answer a question I get a lot.

Which is better – a 5 point or a 7 point Likert scale?

If you want to get a bunch of survey researchers to debate something, ask them about the merits of a 5 point versus a 7 point scale. As everything in life, there's pros and cons with both. At my previous position, we designed all of our national surveys using a 7 point scale. We did that because we used those data to develop predictive models. A 7-point scale gives you more variance in the data than a 5 point scale does which allows for more sophisticated modeling. But there are some downsides – first, it's very difficult to create answer option descriptions for a 7 point scale so, oftentimes, we would anchor the ends and the middle and hope that the respondent can differentiate the other points. The other downside is that most institutional surveys use a 5 point scale and oftentimes we would have to convert these 7point data to 5 point data for them to use internally. The upside of a 5 point scale is that you can more easily define the answer options and there is some research that shows that people have an easier time answering a 5 point scale than other sizes.

Another question I get frequently is about how to deal with harsh comments in an open-ended question.

What should you do when students use that opportunity to talk badly about an instructor or a staff member? That happens. I've seen people take the opportunity to complain about instructors' clothes, their hair or makeup, about a staff person's physical appearance, about the need to fire a person because of some perceived slight. Personally, I don't allow that information to go any further than necessary and I wouldn't allow that information to be included in a report that could be seen by senior leadership. So, in general, I mask individual people's names before releasing comments like Dr. X or Staff Member A. However, if we consistently see the same issue about a person then I would discretely talk to the director or department head to let them know that there's several people saying similar things. But, a single comment should never be used to hurt someone.

Do's and Don'ts for All Survey Question Types



The do's and don'ts we just discussed applied specifically for categorical and Likert-scaled questions. This next set of tips apply to all survey question types.

Don't ask two issues in one question

Please indicate your level of agreement.

	Strongly disagree	Moderately disagree	Neutral	Moderately agree	Strongly agree
My parking lot is convenient and safe. ❌	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My parking lot is the least expensive and closest to campus. ❌	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please indicate your level of agreement.

	Strongly disagree	Moderately disagree	Neutral	Moderately agree	Strongly agree
My parking lot is convenient. ✔️	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My parking lot is safe. ✔️	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My parking lot is the least expensive. ✔️	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My parking lot is closest to campus. ✔️	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>



Tip: Search for “and,” “but,” and “or.”

AR

Don't ask two issues in a single survey question. Compound questions causes confusion among respondents and results in poor quality data.

For example: Let's say parking services asked you to develop a survey about why students choose their parking lot and you drafted this set. Can a parking lot be convenient but not safe? Can a parking lot be inexpensive and further away from campus? The answer is obviously yes. A respondent can't answer these questions because there are two questions combined into one.

The solution is to re-word compound questions to ensure that a single concept appears in each question.

The best way to search for compound questions is to do a word search for “and”, “but”, and “or”. If those words appear in your survey questions, chances are that you've accidentally written a compound question!

Don't ask loaded questions

Poor Question

Where do you like to party?

Better Question

How do you spend your downtime?



Tip: Ask a colleague to review your survey questions. If they feel uncomfortable answering a question, it's likely your survey participants will too.



Asking “loaded” questions will bias your results. Loaded questions contain a false or questionable assumption and is “loaded” with that assumption.

For example, “*Where do you like to party?*” is a loaded question because it assumes that all respondents “party”. If a respondent doesn’t “party”, they have no way to answer this question.

Let’s reword this question to be neutral: *How do you spend your downtime?* This question is no longer loaded and everyone can answer this question truthfully.

I would always encourage you to have a colleague read through your survey. If they feel uncomfortable answering your questions then your survey participants will too.

Don't ask leading questions

Poor Question

How satisfied are you with your instructor's responsiveness? Keep in mind that he teaches six courses.

Better Question

How satisfied are you with your instructor's responsiveness?



In addition, don't ask a "leading" question which will also bias your data. Leading questions are worded in such a way to guide a respondent to answer in a certain way.

An example of a leading question is, "*How satisfied are you with your instructor's responsiveness? Keep in mind that he teaches six courses.*" The author of this question is clearly sending a message that the respondent should rate their instructor more favorably because he is overloaded.

Let's rewrite that question using neutral language: *How satisfied are you with your instructor's responsiveness?* Now, the respondent is asked to fairly rate her instructor regardless of the instructor's workload. The instructor can make the case that, if he rates low on being responsive, it's the workload that's partially responsible.

Remember that survey questions must be neutrally worded so that the respondent will be able to truthfully address the issue without feeling a social pressure to respond a certain way.

Avoid the absolute question

Poor Question

Do you always study in the library?

Better Question

How many hours do you spend studying in the library in a typical week?



Tip: Absolute questions include words like “always,” “all,” “every,” “ever,” “never”, etc. Do a word search of your questions to identify any “absolute” questions.

AR

Absolute questions force respondents into a corner where they can't give useful feedback. Let's say that there is an initiative to build more study space in the campus library but, before undertaking costly construction, the Provost wants confirmation that this is where students spend their time studying.

We wrote this question: *Do you always study in the library?* We just backed our respondents into a corner because it's nearly impossible that a person does something “always” in absolute terms.

A better way to ask that question is: *How many hours do you spend studying in the library in a typical week?* Everyone can now answer this question.

Absolute questions include words like always, all, ever, etc. When you have drafted your survey instrument, do a word search to find these “absolute” words.

Avoid acronyms, abbreviations, and jargon

Poor Question

Have you visited NRC?

Better Question

Have you visited the Nobel Research Center?



Tip: Review your survey questions and ask yourself, “would someone who is new to my institution understand every word on this survey?”

AR

Sometimes words and phrases are unique to an institution, region, or state. While most respondents might understand those local expressions, respondents who are not familiar may not know what it means or how to respond. For that reason, avoid acronyms, technical terms, or jargon that may confuse your respondents. And make sure to provide definitions or examples if you need to include tricky terms or concepts.

For example, on a student engagement survey, we could have written: *Have you visited NRC?* This question would be impossible to answer for those new to the institution.

A better way to ask that question is: *Have you visited the Nobel Research Center?* Here, we have spelled out the center’s name to avoid the confusion that an acronym could create.

When you proofread your survey, ask yourself, “could I answer these questions if I were new to my institution?”

Don't use “negative” words

Poor Questions

How dissatisfied are you with the temperature in the classroom?

Which student activity do you not dislike?

Better Questions

How satisfied are you with the temperature in the classroom?

Which student activity do you like?



It is good practice to avoid writing questions with negative words such as *won't*, *can't*, *don't*, *least* or *worst*. These words can often be overlooked by the respondent, can be confusing to answer, and can result in misleading data. If it is important to use negative words, highlight the word to ensure the meaning of the question is clear.

An example of a question using a “negative” word is, “How dissatisfied are you with the temperature in the classroom?”

Rewrite this question to be, “How satisfied are you with the temperature in the classroom?”

In addition, you must avoid questions with double negatives like, “Which student activity do you not dislike?”

We can rewrite that question to, “Which student activity do you like?” I know that these questions are subtly different but a respondent, who is moving through your survey, is not likely to appreciate that nuance.

And, again, if it's necessary to use negative words, please make sure that you point that out to your respondent.

Don't use complex words when simpler words would work

Poor Questions/Statements

Better Questions/Statements



Respondents are doing you a favor when they take time from their busy lives to answer your survey. And, it's likely that they won't spend a lot of time trying to understand what you're asking. For that reason, make sure that each survey question is worded simply and unambiguously.

Here are some examples of questions that could be re-worded to make them easier to understand:

Are you employed? – should be re-worded to “Do you work?”

How many occupants are in your household? Do not count yourself. Should be re-worded to “How many people live with you?”

Your responses to this questionnaire are confidential. Should be “Your answers are confidential.”

What work-related employment concerns do you have? Should be “What job concerns do you have?”

As you read your survey instrument, ask yourself “how would I ask this question of a colleague in a friendly conversation?” Rewrite any question that appears too academic or formal.

Be sensitive to survey participants

Survey research often explores uncomfortable topics

Must work to ensure honest answers

Sensitive questions might embarrass the respondent if information is public

What is ok to you might be embarrassing to others.



Survey researchers are often asked to explore issues that are difficult to discuss. For example, we might be asked to conduct a survey on campus climate immediately following a racial incident or we might be asked to identify concerns among the gender-fluid student population at a socially-conservative institution.

In order to collect data needed to improve our institution, we must ensure that our survey questions are answered honestly so that we can provide accurate results to decision makers. But, asking sensitive questions may make your respondents uncomfortable which can result in them skipping these questions or answering untruthfully to conform to a society norm.

Sensitive questions vary from person to person but, typically, a question is considered sensitive if the respondent believes that information might be embarrassing or not socially acceptable if made public.

And, what has taken me a while to learn is, the same issue is not embarrassing to everyone. For example, I grew up in a lower income household but I would not find a question about family income uncomfortable. However, someone who grew up in foster care might find a question about family income very sensitive.

Be sensitive to survey participants (cont.)

“How often do you binge drink?”

- **Use neutral words** - *Within the past month, how often did you have three or more alcoholic beverages in one sitting?*
- **Evaluate their friends** – *Within the past month, how often have you observed your close friends having three or more alcoholic beverages in one sitting?*



Sometimes, we have to ask sensitive questions so let's discuss ways that we can make it better. Let's say that we want to understand underage binge drinking at our institution and we write the question, “How often do you binge drink?” as a sample question. As written, this is a loaded question, and will not be answered truthfully since students are taught from a young age that drinking too much is not socially acceptable.

A better way to ask this question is to use neutral words that describe the same issue but without the implied emotion - “*Within the past month, how often did you have three or more alcoholic beverages in one sitting?*” We get the same result but we don't imply a negative behavior by using the words “binge drinking”.

Another way is to ask a respondent about their friends. For example, “*Within the past month, how often have you observed your close friends having three or more alcoholic beverages in one sitting?*” This is asking for information by proxy.

Be sensitive to survey participants (cont.)

“How often do you binge drink?”

- **Ask about past behaviors** - *When you were a first-year student, how often did you drink three or more alcoholic beverages in one sitting in a typical month?*
- **Acknowledge the issue** - *We are interested in understanding the rates of alcohol use at our institution. Your identity will never be revealed; we appreciate your honest response. Within the past month, how often did you have three or more alcoholic beverages in one sitting?*



An alternative approach is to ask about their behaviors that happened in the past. People are usually comfortable admitting to past behaviors. For example, *“When you were a first-year student, how often did you drink three or more alcoholic beverages in one sitting in a typical month?”*

But the most direct approach is to explain to the respondent why you need this information. In that process, you might build trust with the respondent. *“We are interested in understanding the rates of alcohol use at our institution. Your identity will never be revealed; we appreciate your honest response. Within the past month, how often did you have three or more alcoholic beverages in one sitting?”*

Be sensitive to survey participants (cont.)

“How often do you binge drink?”

- **Prefer not to answer:** Consider including a “prefer not to answer” option



In dealing with sensitive questions, consider adding a response option that reads, “prefer not to answer”. That gives everyone an answer option. I have found that very few people choose that response but it indicates that you’re aware this is a sensitive question.

Exclude unrelated survey questions

Survey questions must meet mission of survey.

Survey questions must be linked with action.

Consider helping a unit with budget issues. However, items should still be actionable!



You should resist the temptation to add questions to the instrument that are not connected to the project's research questions just for curiosity or because of pressure from people outside the project. For example, let's say you're conducting a survey on learning outcomes of first-year students in general education courses and the Director of Student Life finds out. She calls wants add a few questions asking what students plan to do for spring break. Should you do that? No, for a few reasons:

Survey questions shouldn't be added that don't relate to the mission of the survey. In this example, the mission is understanding first-year student learning outcomes; and while most of those students do not stay on-campus during spring break, the survey has nothing to do with that.

Let's say you asked the Director of Student Life, "Why do you want to know this?". Her likely response is "I'm curious". Satisfying a curiosity is never a good reason to add survey questions – survey questions should always be linked with an improvement action. You could ask the Director of Student Life, "What actions would you take if you knew students' spring break plans?" This may illuminate the real information the Director is interested in which may align with the mission of the survey. Alternatively, the Director may realize that her question is not good because it's not actionable.

When should you consider adding questions? Sometimes units don't have the budget or resources to survey students and adding a few questions to your survey will help them and the students they serve. But, those items should still be actionable.

Be Specific

Poor Questions

How satisfied were you with your residence hall experience?

Who helped you the most during your college career?

Better Questions

Over the past semester, how satisfied were you with your residence hall experience?

Name the faculty or staff person at this institution who has helped you the most in your college career.



It's easy to write questions that, while on the surface look reasonable, can be misinterpreted. One common misinterpretation is time. As a survey researcher, you might have the current time frame in mind, but your survey participant may think differently.

Here's an example: How satisfied were you with your residence hall experience? This isn't a poor question if you're only surveying first-year students. But, if there are upperclassmen in the survey, then they could still be upset about an incident that happened three years ago and respond negatively. That doesn't help the residence hall staff effect change now.

Let's rewrite that question to be more time-specific: Over the past semester, how satisfied were you with your residence hall experience? Here, we've narrowed the time frame from "any time" to the "past semester". That gives us information that is more actionable.

Oftentimes, questions that are too broad can be interpreted differently by different people. For example, the Vice President of Student Affairs asks you to survey students in order to identify faculty and staff who have significantly helped them. He wants to recognize these faculty/staff for their commitment to student success.

To collect that data, you ask this question: Who helped you the most during your college career? You intended the respondent to name a faculty or staff member and was surprised to receive answers like "Mom and dad", "Me", "My best friend".

Let's rewrite that question to be more specific: Name the faculty or staff person at this institution who has helped you the most in your college career. Here, you narrowed the place to this institution and specifically asked for a faculty or staff person. This should get you the information you want.

Ask questions that can be answered

Poor Question

What was the expected family contribution reported on the Free Application for Federal Student Aid (FAFSA)?

Better Question

Which best approximates the amount of support provided by your family to pay for college expenses?



Surveys should only include questions for which participants have a reasonable expectation of answering. For example, asking about financial aid might be confusing since it can mean a lot of different things to different students if considering scholarships, grants, loans, and family contributions. Confusion can happen if the respondent does not have the information necessary to answer the question, if he or she can't remember the information, or he or she does not understand what the question is asking or what the response options mean.

Here's an example of a question that, while might sound good, might be difficult for some students to answer: *What was the expected family contribution reported on the Free Application for Federal Student Aid (FAFSA)?* Unless the student helped fill out this form, it's not likely the student will remember an exact number and may skip the question rather than guess.

Instead of abandoning the concept, we could rewrite it to be *"Which best approximates the amount of support provided by your family to pay for college expenses?"* With answer options like None, \$1 to \$2500, \$2501 to \$5000, etc. And including an "I don't know" answer option. While this isn't an exact number, it will give a sense of the level of support.

Create a library of questions



AR

As you build more surveys, you'll start to notice that some questions are used repeatedly. Consider building your own "library" of common questions that have been vetted by content experts or published research. Examples might be self-efficacy/grit metrics, program evaluation metrics, or satisfaction metrics. It will make future survey development faster.

Questions & Discussion



Let's pause to answer some questions. As people are formulating their questions, if they any, I'm going to answer a question I get a lot.

What are some examples of other sensitive areas that we need to be aware of as we're drafting survey questions?

We think about questions like gender identity and sexual orientation as being especially sensitive. Anytime we ask questions about the student themselves, there is a potential that those items will be sensitive. Things that might not be apparent are questions concerning their experience with harassment, experience with diversity, and being victims of insensitive remarks. Some students may be sensitive to questions about GPA, family structure like assuming a student has a parent, political beliefs, and religious affiliation.

As I stated earlier, the best advice I can give is to use neutral language and to put yourselves in the shoes of your respondents. When necessary, acknowledge that these are potentially sensitive areas BUT that the data will be used to improve the student experience.

Also, absolutely do not make any sensitive question be required to be answered.

Learn More

Publications (sample)

- Linda A. Suskie. (1996). *Questionnaire Survey Research: What Works (Second Edition)* [PDF file]. Tallahassee, FL: AIR. Retrieved from www.airweb.org.

Survey Research/Assessment Conference Content (sample)

- AIR Forum
- IUPUI Assessment Institute
- NASPA Assessment and Persistence



There have been volumes written about survey research and item construction. Here is one book that is available for free with an AIR membership – you can download this book from our Publications section on the website.

In addition, many organizations, like AIR, host educational opportunities to improve your survey research and reporting skills. I've attended these and recommend them.

Thank You

You will receive an email containing a link to evaluate this webinar. Please share your feedback!

Join us for the next webinar, *Do's and Don'ts in Reporting Survey Data*, on October 15, 2019.

Darlana Jones, AIR



Don't forget to join me for Part 2 of this webinar series next week. In that webinar, we explore some do's and don'ts in reporting survey data.

Also, don't forget that you'll be receiving an email with a link to a survey to give us feedback.

Thank you for attending and have a great rest of your day and week!