Tips for Survey Design

Survey research is one of the most popular methods for collecting primary data. This handout provides some practical tips for constructing a survey, options for survey platforms, and resources for constructing and administering a survey. While there are general guidelines for survey design, practices may vary by discipline, so ask your advisor or instructor if you have specific questions about your survey or if you feel that you need different recommendations. See the “For More Information and Assistance” section at the end of this document for further information on survey design.

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General Tips

Writing questions

Survey questions should be written with concrete research goals in mind; regard each question as an instrument that can yield a specific measure which you need to perform your analysis. When designing a survey, consider how question wording and response categories influence your respondent’s response. Great questions will motivate the respondent to answer frankly, accurately and with ease, and great responses will in turn make data analysis and interpretation of results more straightforward and exact. Below, we discuss some strategies for writing good questions. We drew from guidelines listed by Qualtrics (a survey platform) in their page on “Writing Great Questions,” and we also suggest that you consult your departmental advisor or instructor and other resources that we list under “For More Information and Assistance.”

1. Avoid loaded or leading words or questions. Some words or questions can lead respondents to give a certain response that may not accurately reflect what they really think. For example, the question, “You don’t believe in superstitions, do you?” might suggest some disapproval of superstitions that can in turn encourage respondents to answer “No,” even if they do indeed believe in superstitions. Or, the question, “Should the government force citizens into a universal health care system?” might be too strong (especially given the use of the word “force”), and could lead all respondents to give the same answer (i.e., “No”) even if they actually vary in their views about health care.

2. Avoid mutually non-exclusive response categories. When designing multiple choice questions, make sure that the response categories are mutually exclusive, i.e., clearly different from one another, so that your respondents can definitely make a choice. For example, when asking the question, “Do you
like sandwiches?”, respondents may have a hard time choosing between “Love” or “Like,” but they may be able to choose when you give them more alternatives, e.g., “Not at all, a little bit, somewhat, quite a bit, very much.”

3. **Be sure to have an exhaustive listing.** When deciding what alternatives to include in your multiple choice, make sure that you have all possible responses covered. Pre-testing your survey before you collect data can help you identify what the possible responses may be. For example, you can ask your pre-test respondents to fill in their own responses to your question, and then use these filled-in responses to create different answer choices.

4. **Be sure your listings are balanced.** For example, if you are asking your respondents to evaluate the uniqueness of a product, respondents may not know what to choose if the response alternatives consist of just “good,” “very good,” and “extremely good.” Specifically, respondents who did not find the product unique might not see a fitting response alternative, and may therefore not respond — which is never a desired outcome on the researcher’s part. To avoid inaccurate response or non-response, make sure your listing of response alternatives are balanced. In this particular situation, one solution is to list these five alternatives: “poor – fair – good – very good – excellent.”

5. **Do not force answers.** You must be sure that your questions do not force respondents to provide information that they may not want to share. This is important as anonymity, privacy and confidentiality are major issues with survey design. When thinking about what information you need, carefully consider what may be too private and also not pertinent to your research. Some examples of information that could be regarded as too private (in the context of some surveys) include sexual orientation, religious beliefs and personal finances. Forced answers should only be used when you need to elicit information that is crucial to your research.

6. **Use “catch-all” responses sparingly.** When writing multiple choice questions, it is often tempting to build-in one or more “catch-all” responses like “Other”, “Don’t know”, “None of the above”, “Not applicable”, etc., because it helps ensure that your listings are exhaustive and the answers solicited are valid and unforced. However, one of the biggest drawbacks of including catch-alls is that they can encourage non-response among respondents who may otherwise have proffered a valid answer, and thus increase the incidence of missing data. So use these response categories sparingly and try to ensure that your respondents are capable of answering the majority of the questions on your survey. In addition, when including “Other” as a listing in a multiple-choice question, it may be worthwhile to also include an open-ended text box where respondents can write-in a more specific answer.

7. **Do not use jargon.** It is not recommended that you use words that could be confusing or unfamiliar to your respondents. A respondent may be confused by the question, “What are your opinions about Bourdieu’s concept of habitus?” Instead, stick with words and terms that are commonly known and widely understood.

8. **Review the sequence of questions.** Questions placed out of context or out of order can confuse respondents or lead them to certain responses that do not accurately reflect their actual views. An example would be first asking respondents, “How do you feel about global warming?”, and then asking respondents, “Do you care about the environment?” How respondents answer the first question may influence how they answer the second question. In general, broad and general questions should be asked before more specific questions, and it may be advisable to place easy-to-answer questions at the end.

9. **Avoid non-directed questions.** In other words, make sure that your questions are on an explicit topic that your respondents can identify. The open-ended question, “How would you improve health care in the U.S.?” may be too general — respondents may not know if they should discuss the provision of health care, the policies related to health care, or the economics of health care. Instead, if you are
interested in the provision of health care, you can ask, “How would you improve the provision of health care in the U.S.?”

10. **Avoid non-specific questions.** These are related to non-directed questions. For example, you may ask, “How do you feel about public transportation?”, but respondents may not know if you are interested in a particular type of public transportation, or public transportation in a specific country, and so on. Instead, if you are interested in a particular type of public transportation in a particular location, such as AC transit in Alameda County, you can ask, “How do you feel about the AC transit system in Alameda County?”

11. **Avoid double-barreled questions.** These questions are “double-barreled” because they actually ask two questions in one. For example, the question, “What is the cheapest and most convenient transportation for you?”, actually asks first what the cheapest transportation is, and second what the most convenient transportation is. The responses to these two questions can be different (i.e., the cheapest may not be the most convenient), so the respondent might not know what to answer when the two questions are combined into one double-barreled question. If you find that a question is hard to answer for this reason, break the question up into smaller, more manageable questions.

12. **Avoid dichotomous questions.** A dichotomous question is somewhat similar to the double-barreled question, except the issue is that the question may be asking for two answers that may be independent. As an example, take the question “Do you think religion is a necessary part of society or is a necessary part of personal growth?” Some respondents to this question may think that religion is a necessary part of society but not of personal growth, while others may think that religion is necessary for both society and personal growth. If this is the case, these respondents may get confused and choose to leave the question unanswered altogether. By separating this question into two distinct questions you will be able to get at both answers accurately and avoid non-response due to confusion.

13. **Avoid long questions.** Questions that are too long can lead to non-response. Try to keep your questions as short and as straightforward as possible.

**Common Question Types**

Questions on a survey can be broadly grouped into two types: closed-ended questions and open-ended questions. Below, we describe both types of questions, give examples, and discuss the advantages and disadvantages of each.

1. Closed-ended questions. These are questions for which you provide response alternatives, i.e., respondents choose their answers from some list that you provide. Some examples of closed-ended questions are:

   a) **Multiple choice questions**, in which you ask respondents to choose one answer from a list. For example, given the question “What is your favorite mode of public transportation in your local area?”, choices may include “Bus,” “Taxi,” “Subway,” or “Ferry.” If you are not sure whether you covered all of the different modes of transportation, you can also include an “Other” option, and ask respondents to specify the “other” transportation that they have in mind.

   b) **Multiple answer questions**, in which you ask respondents to select all that apply from a list. An example is the question “Which of the following extracurricular activities did you participate in during college? Select all that apply.”

   c) **Ranking questions**, in which you ask respondents to rank a number of items first, second, etc. An example is the question “Rank the following five TV game shows from 1 to 5, 1 being your favorite and 5 being your least favorite.”
d) Rating questions, in which you ask respondents to rate a number of items on some scale(s). For example, you might ask respondents, “Rate the quality of customer service at the following stores on the following scale: 1 = poor, 2 = fair, 3 = good, 4 = very good, 5 = excellent.”

2. Open-ended questions. These are questions for which you do not provide response alternatives, but instead respondents are asked to give their own answers. These questions are often asked to elicit in-depth responses on certain topics of interest. For instance, at the end of a survey on customer satisfaction, you can ask, “What suggestions do you have for how Company A can improve on its mobile device?”

Though neither type of question is generally better than the other, they each offer distinct advantages and disadvantages. Some advantages of using closed-ended questions include: the use of standard questions and answers allow for simple interviewer training (if the survey is to be administered in person), easy coding of answers and easy analysis. A survey with more closed-ended questions than open-ended questions may also take less time to complete, and often respondents prefer closed-ended questions because of their simplicity. Furthermore, because answers do not have to be coded individually and deciphered, you can avoid interviewer or coder bias. One disadvantage is that respondents may give inaccurate answers or may not answer for a variety of reasons, e.g., they are unclear about the question asked or they do not see a response alternative that fits their views. A researcher can, however, avoid poor responses or non-response by avoiding the common pitfalls in question writing (see above section on “Writing Questions”).

Open-ended questions can lead to increased accuracy in responses because they allow respondents to freely exchange their ideas without bias. In this way, they may be more reliable. At the same time, respondents may prefer closed-ended questions to open-ended ones, because the former take less time to complete. Thus, a survey with many open-ended questions may fatigue the respondent and foster non-response. As for data analysis, open-ended responses may require more extensive coding. Relationally, it will be important that interviewers or coders (if more than one are involved) are well-educated on how to ask open-ended questions and code corresponding responses.

Response categories

Rating scales

For closed-ended questions that involve rating, one needs to consider and pick which scale to use. The type of scale to use depends on the construct that the question measures. Some questions are measuring a unipolar construct. For instance, the question, “Will you study for your final exam in ECON 101?” measures a unipolar construct, as responses will flow in one specific direction, from “definitely will not” to “definitely will”. In this case, a five-point scale, such as “definitely will not” – “probably will not” – “might or might not” – “probably will” – “definitely will”, can accurately capture the range of responses. Another example is the question, “How annoyed are you at the proliferation of reality television shows?” Here too, you can use a five-point scale arrayed as follows: “not at all” – “slightly” – “moderately” – “very” – “extremely”

Other questions are measuring a bipolar construct. For instance, take the question, “Did your interview at Company X positively or negatively influence your decision to take the job?” Here, feelings about the influence of the interview can flow in two directions, either towards “negatively” or towards “positively”. Here, it is optimal to use a seven-point scale that includes responses in the two directions with a middle alternative, such as, “extremely negatively” – “negatively” – “somewhat negatively” – “neither negatively nor positively” – “somewhat positively” – “positively” – “extremely positively”.

Another example is the question, “How do you compare your performance on the test to your peers’
performance?” Again, responses can go in two directions (either better or worse), so you can use a seven-point scale arrayed as follows: “a lot better” – “better” – “somewhat better” – “neither better nor worse” – “somewhat worse” – “worse” – “a lot worse”.

**Rating vs. ranking**

When offering closed-ended questions that compare items, the researcher needs to decide when and whether to use ranking or rating. Rating is often popular as it can be faster and easier to analyze. However, ranking forces respondents to directly compare and differentiate between items in a question, and so responses may be more reliable. For instance, if we are interested in who among five instructors is the favorite with students, we can ask students to rate each instructor, but the ratings would not necessarily tell us which instructor is the favorite. By contrast, we can ask students to rank the instructors from one to five, and we can more reliably see which instructor is ranked first by the most students. Ratings are useful, however, if we want to know what the students think about the instructors’ characteristics and qualities.

**Survey platforms**

The following table summarizes the qualities of four popular survey platforms. The information below is by no means exhaustive, but it should give you a basic idea of how the different platforms compare and which one might best suit your needs. When selecting a platform, you may want to additionally consult with your department, advisor, instructor or co-researchers to see which platform may be best for your purposes. We at SSDS can also consult with you on which platform will best suit your needs.

<table>
<thead>
<tr>
<th>Features</th>
<th>SurveyMonkey</th>
<th>Zoomerang</th>
<th>Opinio</th>
<th>Qualtrics</th>
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</table>
| **Account Options and Cost** |  ● Offers “Basic” accounts for free.  
● Three-tiers of “Pro” accounts also available:  
  ● Select ($23.99/mo)  
  ● Gold ($299/yr)  
  ● Platinum ($779/yr) |  ● Offers “Basic” accounts for free.  
● Two tiers of paid accounts also offered:  
  ● Pro ($199/yr)  
  ● Premium (%599/yr) |  ● Available free through Stanford if you have a SUNet ID, but only on a limited basis.  
● Non-affiliated users can also sign up for a free trial account. |  ● Available free Stanford if you have a SUNet ID.  
● Non-affiliated users can also sign up for a free trial account. |
| **Essential Features** |  For “Basic” accounts:  
  ● Unlimited Surveys @ 10 questions/survey;  
  ● 15 question formats including text boxes, multiple choice, ranking scales, and matrix of choices;  
  ● 100 responses allowed per survey;  
  ● Supports any language, including Unicode;  
  ● Responses can be collected using a weblink, email, Facebook or embedded in your website;  
  ● Up to 3 collectors are allowed per survey; |  For “Basic” accounts:  
  ● Unlimited Surveys @ 12 questions/survey;  
  ● 15 question formats including text boxes, multiple choice, ranking scales, matrix of choices, and images;  
  ● 100 responses allowed per survey;  
  ● Supports all languages;  
  ● Responses can be collected using a weblink, email, Facebook, Twitter, or embedded in your website; |  SUNet ID accounts:  
  ● Unlimited Surveys with unlimited questions / survey;  
  ● Users can customize the link to the survey with the Stanford domain name included (opino.stanford.edu/...);  
  ● 8 question formats including: text boxes, multiple choice, ranking scales, rating numeric questions, dropdowns, and matrix of choices;  
  ● Unlimited number of responses allowed per survey; |  SUNet ID accounts:  
  ● Unlimited Surveys with unlimited questions / survey;  
  ● 15 question formats including: text boxes, multiple choice, ranking scales, matrix of choices, constant sum, page timers, images and heat maps;  
  ● Unlimited number of responses allowed per survey;  
  ● Surveys can be translated into 49 languages, and users can track each of these; |
<table>
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<tr>
<th><strong>Complex Functions</strong></th>
<th><strong>Long-Term Use</strong></th>
<th><strong>Data Formats</strong></th>
</tr>
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<tbody>
<tr>
<td>● “Pro” users can opt to share some or all results with others and allow them to export results.</td>
<td>● All users can close a collector manually, or by using a pre-specified cutoff-date or a maximum response count.</td>
<td>● Surveys created in another file or format cannot be imported or uploaded into SurveyMonkey.</td>
</tr>
<tr>
<td>● Multiple collectors are allowed per survey; All users can opt to share all their results with others; paid accounts have access to email data export and multi-user access.</td>
<td>● Free users can close a collector manually. Paid account holders can also use a pre-specified cutoff-date, while “Premium” users can use a maximum response count. Surveys for all account types are stored indefinitely.</td>
<td>● MS-Word, .txt, or SurveyMonkey files can be imported to Zoomerang by paid account holders.</td>
</tr>
<tr>
<td>survey; ● Multilingual feature to create multiple language versions of the same survey; Users can collaborate as long as they have access to the survey; Responses can be collected using weblink, email, or embedded into your website.</td>
<td>● All users can close a collector manually or by using a pre-specified cutoff date. Surveys for all account types are stored indefinitely. Questions from prior or existing surveys on the user’s account can be used to build questions in a new survey.</td>
<td>● Questions can be imported to or exported from Opinion using XML and ZIP files.</td>
</tr>
<tr>
<td>● Responses can be collected using weblink, email, or embedded into your website; “Collaborate” option allows multi-user access to a survey and/or its results.</td>
<td>● All users can set mandatory responses. All users can enable SSL encryption. Contact <a href="mailto:support@qualtrics.com">support@qualtrics.com</a> to receive HIPAA compliance. Users can insert Java, HTML and CSS code to customize their surveys.</td>
<td>● Questions can be imported to or exported from Qualtrics using XML files.</td>
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**Tips for Survey Design**

- Users have the option to randomize/sort answers to eliminate response bias.
- Skip logic can be used on multiple-choice questions to move respondents forward to another point in the survey.
- Survey can also be customized so certain responses are mandatory.
- Only “Pro” account holders can secure their survey with SSL encryption. SurveyMonkey does not support the collection of protected health information and is not HIPAA compliant.

- Users have the option to randomize/sort answers to eliminate response bias.
- Skip and branch logic are only available to paid account holders. Paid account holders can customize survey to elicit mandatory responses.
- Only “Premium” account holders can secure their survey with SSL encryption. Zoomerang allows all users to create HIPAA compliant surveys.
- Customization options like adding Logos and editing live surveys are offered to paid account holders.

- Users have the option to randomize/sort answers to eliminate response bias.
- Skip logic, display logic and piping are available to all users. Survey can be customized so certain responses are mandatory.
- All users can enable SSL encryption. All users can decide to keep responses anonymous or use email invitations to track responses.
- Users can insert Java, HTML and CSS code to customize their surveys.

- Users have the option to randomize/sort answers to eliminate response bias.
- Skip logic, display logic (which conditionally displays questions to respondents), and merge and loop functions are available to all users.
- All users can set mandatory responses.
- All users can enable SSL encryption.
- Contact support@qualtrics.com to receive HIPAA compliance.
- Users can insert Java, HTML and CSS code to customize their surveys.

**Data Formats**

- Surveys created in another file or format cannot be imported or uploaded into SurveyMonkey. MS-Word, .txt, or SurveyMonkey files can be imported to Zoomerang by paid account holders.
- Questions can be imported to or exported from Opinion using XML and ZIP files.
- Questions can be imported to or exported from Qualtrics using XML files.
### User Support

<table>
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<tr>
<th><strong>User Support</strong></th>
<th><strong>Holders of “Basic” accounts cannot export data.</strong></th>
<th><strong>“Pro” users can download data summaries in pdf, html, xml and csv formats. Data can also be exported in MS-Excel and SPSS.</strong></th>
<th><strong>Data from survey results can be downloaded from Opinio as a csv file, an SPSS file, a PDF file or an HTML file.</strong></th>
<th><strong>Data from survey results can be downloaded from Qualtrics as a csv file, an SPSS file, or an XML or HTML file.</strong></th>
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|  | **20 “Basic” Survey Templates are available to all new users.** | **6 “Basic” Survey Templates are available to all new users.** | **Novice users can use the “How-To” guides on the Opinio website (http://www.objectplanet.com/opinio/howto/) as well as the Opinio knowledge base.** | **Novice users can use the “Quick Survey Builder” tool to begin creating surveys.** |
|  | **User support is offered on the site in the form of survey tutorials, an extensive FAQ section, and online customer support.** | **User support is offered on the site in the form of basic tutorials, a searchable knowledge base, and email customer support.** | **Users can use the help button for assistance on each part of the survey engine.** | **All users have access to the Qualtrics Survey Library which contains templates for many types of surveys.** |
|  | **Sign-up at: [Surveymonkey.com](http://www.surveymonkey.com/) Stanford does not offer support for SurveyMonkey.** | **Sign-up at: [Zoomerang.com](http://www.zoomerang.com/) Stanford does not offer support for Zoomerang.** | **Users with SUNet IDs can learn about setting up an account through SSDS.** | **Users with SUNet IDs can learn about setting up an account at: [http://survey.stanford.edu](http://survey.stanford.edu) Stanford IT Services and SSDS offer limited support for Stanford affiliated users utilizing Qualtrics.** |

### Access

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<tr>
<th><strong>Access</strong></th>
<th><strong>Sign-up at: <a href="http://www.surveymonkey.com/">Surveymonkey.com</a> Stanford does not offer support for SurveyMonkey.</strong></th>
<th><strong>Sign-up at: <a href="http://www.zoomerang.com/">Zoomerang.com</a> Stanford does not offer support for Zoomerang.</strong></th>
<th><strong>Users with SUNet IDs can learn about setting up an account through SSDS.</strong></th>
<th><strong>Users with SUNet IDs can learn about setting up an account at: <a href="http://survey.stanford.edu">http://survey.stanford.edu</a> Stanford IT Services and SSDS offer limited support for Stanford affiliated users utilizing Qualtrics.</strong></th>
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### For More Information and Assistance

**Survey platform websites**

You can visit the following links for more information and assistance with the survey platforms described above:

- **Survey Monkey**: [http://www.surveymonkey.com/](http://www.surveymonkey.com/)

Those with SUNet IDs should also visit the following website for using Qualtrics at Stanford (free to SUNet ID holders):

[http://itservices.stanford.edu/service/survey](http://itservices.stanford.edu/service/survey)
Publications on survey design and research

Available at Green Library:


The above titles can also be found in the Velma Denning Room (Green Library Bing Wing Room 120F), which has additional books on survey design and analysis. Please keep in mind that the collection is non-circulating. The following titles may be particularly useful:


SSDS Services at Stanford

The software consultants at Social Science Data and Software (SSDS) provides support for the Stanford Community. Users can view documents, access information about our drop-in hours, and submit questions from our web page at http://ssds.stanford.edu.