



Designing a Questionnaire for Survey Research

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It is a sad state of research that many questionnaires are designed by people lacking formal training in survey research and questionnaire design, and yet the design of the research is the most essential ingredient for ensuring the quality and usability of the data after the money has been spent to collect the data. There are numerous excellent texts available – the guru of questionnaire design is Don Dillman. Even his 1978 text is still the best starting place. If you are serious about learning this highly important skill, take the time to read Dillman and others.

In the meantime, the following guidelines will help you evaluate your questionnaire for quality. Designing the survey with an understanding of the analysis you will conduct with the data is critical. While this white paper was written with an internet survey in mind, the principles apply to mail, telephone and face-to-face surveys as well.

Part 1: Research Plan

The steps below outline the process of designing research.

Research Design Process

1. Identify the goals clearly (these will be outcome variables).

Below are some examples:

- a. Interest in online purchase of products or services
- b. Need for support capabilities for purchases of products or services
- c. Price points/thresholds of products
- d. Success factors behind a social service program

2. Next, identify drivers or contributing factors for those outcomes. The drivers below relate to the examples above.

- a. Current practices and weaknesses therein (e.g., offline/online; how much mechanized, communication capabilities)
- b. Barriers to switch to signing up for an online capability
- c. Kind of business/customer base; purchase/evaluation authority role, job responsibility in organization (firmographics)

3. Write questions that clearly actualize/measure the above issues.

KEY: Make sure that you know what you are going to do with the answers. If the mean of something is 4.5 (or top 2 box is 75%), or the percentage of respondents is 65% yes, then what will that tell you to do? If you can't act on an answer (e.g., craft marketing message, identify area of website for improvement, instruct product development team), then the question is worthless at best.

Part 2: Designing the Questionnaire

The goal in questionnaire design is to collect the most accurate and actionable data possible. Three overall pointers to keep in mind are:

- Be unambiguous with regards to meaning of each questionnaire item;
- Minimize respondent burden;
- Ask the questions that will give you the answers you need at the analysis stage.

The steps below outline the overall structure of a survey instrument.

1. Start off with interesting, but easy questions.
2. Put more difficult questions (e.g., grids for rating pain points) in the middle.
3. Firmographics/demographics almost ALWAYS go at the end of the survey.
4. Limit the number of open ends (e.g., 'what kinds of business challenges do you have') to no more than 3.
5. Organize the survey by topics, so the respondent is following a logical flow of thought. (This organization also helps your analysis of the data after data are collected.)
6. Keep the language succinct and clear: if you can say it in 5 words instead of 7, do so.
7. Don't just start writing questionnaire items. Start with the model (#1-3 above) and then work backward.

Do you have an incentive? In general, providing an incentive boosts the willingness to respond and indicates respect for the respondents' time. Not all studies need incentives. The requirement to provide incentives depends on the topic of the survey, method of fielding (phone, mail, internet, etc.), population surveyed, etc.

Part 3: A Checklist for Questionnaire Design Quality

Go through your survey for each criteria for best results.

Checked	Questionnaire Design Criteria	Explanation/Example
	Intro text language is polite and helpful (altruistic appeal, incentive, privacy, thanks -- for pop-up message).	Intro: Thank you for taking our short survey. Your input will help us improve our services to you. Pop-up invite: "<Company> needs your feedback so we can ensure high quality service to you. Also, for every completed survey we'll donate \$2 to the charity of your choice. Would you like to take our survey?"
	Screeners and skips direct the correct people.	This step usually requires a separate pass through the survey.
	Logic of order: Demographic questions at the end, skips logical, starts off with easy to answer, interesting questions about the topic of the survey, puts difficult/core questions in middle, then easier topical questions, and then finally demographics or firmographic.	Help the respondent along by priming his/her mind, getting to the core of the survey, and then ease the respondent out with easier questions. Demographic questions should be at the end unless they are screeners.
	Scales: Balanced, consistently run in one direction make sense, values correct.	A common error is to have overlapping ranges (e.g., in length of use: 1-2 months, 2-4 months – should be '1-2 months, 3-4 months...')
	Language: clear syntax, unambiguous meaning, not wordy.	It's good to have someone read the survey that did not write it.

	Objectives and Audience of survey clear and appropriate for fielding methodology	When the objectives are not clear, the data will be fuzzy, too.
	Ranking questions not too long (up to 5 ranks allowed)	People can't really distinguish beyond 5 or 6 levels.
	Matrices not too long (up to 8 items in one matrix)	We also recommend shorter 5-point scales rather than 10 point scales, unless you will be using the results for factor analyses. Also, consider a 3 point 'Very, Somewhat, Not at all' construct.
	No over-reliance on open-ends; objective of open-end clear.	Don't ask 'what did you think about the concept' but something more focused, such as, 'what kind of use could you have for a product with this concept' (or whatever it is that you really want to know)
	Survey not overly long or burdensome.	Pop-ups should be completed in 1 to 3 minutes for best response, and surveys with an email invite should be under 10 minutes. It's in Internet time, and therefore long surveys may be best divided into two.
	Completeness of dimensions of subject matter (e.g., in customer satisfaction study, are all dimensions of customer satisfaction addressed?)	Forgetting questions happens to the best of us, but a careful outline of objectives, and then a model of key drivers of your outcome (e.g., interest in a product) can avoid most omissions.
	Values for answers: mutually exclusive where 'select one', is not overlapping values or missing categories.	If you aren't sure of all the possible categories, at least leave an 'other, please specify'.
	No 'double-barreled' questions (that ask about two things in one question)	An example of a double-barreled question would be "how important are money and prestige to you?" (because money might be important but prestige not).
	No redundant or very similar questions	For example, asking 'what is your age' and 'what year were you born?'
	Format of question is appropriate for question type.	For example, using a 'select one' when you really need a 'select all that apply'.
	Ensure that subjective values aren't used where objective values are appropriate.	Where the scale is 'A lot, frequently, not too often, rarely' instead of 'daily, at least once/week, 2-3 times/month, 1/month or less'