

Questionnaire Design: An Expert Approach

Learn how designing the right questionnaire can improve data quality, lower research costs, and boost your response rate by 25% or more.

CONTRIBUTING EDITOR

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YOU WILL LEARN

How to craft an expert questionnaire

The most effective ways to ask questions

How the newest technologies are changing the face of questionnaire design

Questionnaire design tips, including how to lessen respondent boredom

Methods to cut costs and maximize response

Executive Summary

This paper will show you how an expert approach to questionnaire design can not only maximize response but also improve data quality, lower research costs and aid in the overall decision-making capability of any organization.

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Translating Information Needs Into Intelligence

Why do you need expert questionnaire design? Because an effective questionnaire **successfully translates the intelligence needs of the researcher into questions that respondents are both willing and able to answer.**

When properly executed, the right questionnaire can boost response rates and markedly decrease overall research costs. Think of a properly designed questionnaire as the gatekeeper to your survey process. If the gateway is faulty or poor in design, then errors, false responses and corrupt data can find its way into your research. This white paper will introduce you to easy-to-execute concepts that will help you create more expert questionnaires to serve your survey research needs.

Survey research provides organizations of all kinds with insights that help them drive progress. For example, in 2005, WorldVision—a leading Christian-based charity that helps relief victims and needy children in nearly 100 countries—invested in a survey questionnaire to learn about donors’ motivations for giving.

The results of this survey drove the creation of a customized direct mail campaign tailored to act on the information learned.

- World Vision’s survey ultimately led to an **increase in revenue of 23%** over the original goal, totaling over \$997,000.00 raised¹.

Saving Costs Through Good Questionnaire Design

Actionable, useful research results aren’t the only reasons why good questionnaire design is critical. Improperly designed questionnaires can lead to incomplete and—of more concern— inaccurate information. This can often taint and degrade the decision-making process that flows from the research.

A properly designed questionnaire minimizes

- occurrence of response errors, both in the form of inaccurate answers or improper analysis and interpretation of answers.
- errors that could be introduced by the form of the questionnaire itself.
- respondent fatigue and boredom, since incomplete interviews have limited usefulness at best.

At its best, questionnaire design can also save labor costs in checking and coding responses. To give a simple example, let’s say you’re rating customer satisfaction with your customer service team’s responsiveness. If you ask your customers to tell you about their satisfaction in an openended essay format, the effort to read,

classify and grade those answers will be a laborious and often costly process—plus it introduces a level of subjectivity from each grader. A better questionnaire design

would break such a qualitative, hard-to-grade answer into components that can be automatically graded with an online survey, such as:

- How satisfied were you with the timeliness of our response?
- On a scale of 1 to 5, how friendly was the customer service representative?
- On a scale of 1 to 5, how knowledgeable was the customer service representative?
- Of all the customer service experiences you've had by phone, would you rate ours better, about average, or worse than normal?

By framing the questions in this way, responses about satisfaction with customer service are addressed in their component parts, and the variables that contribute to customer satisfaction can now be isolated. The results of such question wording can often deliver more information than a single open-ended response, remove subjectivity in grading, and reduce labor costs by automating the scoring process, instead of having a person manually review each answer.

Achieving Expert Questionnaire Design

By adhering to certain guidelines and answering some key questions, researchers can develop quality control standards for questionnaire design and avoid potentially expensive mistakes. In order to deliver targeted responses and valuable data from engaged respondents, a basic process should be followed.

Getting the Right Information

Initially, you must establish the type of information intended for the survey content. When you are ready to begin designing a questionnaire you should have the following items already identified²:

- The **components** of the research problem you are looking to answer
- A rough idea of the **questions** you are planning to ask
- The working **hypothesis** that you are ready to validate or disprove

A good questionnaire is first and foremost designed with the target audience in mind. Educational levels and experience must be taken into account when designing questions, since questionnaires that “speak over the head” of the audience often

The Right Question Unlocks More Information

If you were to ask, “Why did you choose the SUV you purchased?” the answer would most likely be short, such as “It was the most affordable” or “I liked the style.”

But what if you asked these three questions instead:

- “What was your main reason for choosing this SUV?”
- “How do you feel your SUV compares to other brands?”
- “What features of your SUV appealed to you the most?”

Using the latter format, you are likely to find many more detailed responses³.

lead to a high occurrence of “uncertain” or “no opinion” responses as well as high respondent abandonment rates.

Perfecting Question Content

In order to clarify what each question should contain, experienced researchers first determine how the data will be used. Typically, any questions that do not address the research problem directly are eliminated; however, there are a few exceptions:

- Filler questions are useful to build a relationship with the respondent and sometimes questions are repeated to better assess reliability or validity.
- Demographic questions can give you useful information on how responses may be influenced by age, gender, income, or marital status.

Asking Questions Effectively

Choosing Interview Methods

Types of interviewing methods bear directly on the style and type of questionnaire developed.

- *Personal interviews* use face-to-face interaction and are often longer and more complex, since they allow plenty of opportunities for feedback and clarification.
- A *telephone survey* should be short and simple, as the respondent is not able to visually interact with the questionnaire.
- *Self-administered questionnaires*, such as mail surveys and online surveys, need detailed but simple instructions and questions to minimize confusion.
 - o *Online surveys* use the Web to deliver surveys that look like paper surveys but are actually software programs that administer a questionnaire. Online surveys offer many advantages, including:
 - * *Faster access to your research data*, since it is collected and available “in real time.” In fact, according to research published in the *Journal of Computer Mediated Communication* that compared mail surveys to online surveys, the online surveys were completed faster, with 80% of responses coming in just three days.
 - * *A level of data validation, accuracy, and completeness* other methods can’t equal because the survey software can prompt the respondent to fill in blanks or answer skipped questions.

Questionnaire Design in Action: Marconi

Often a combination of methods can yield impressive results. When Infosurv worked with Marconi Communications, we employed a dual format questionnaire, using both telephone and online questionnaires for 200 of their customers.

As a result, Infosurv provided numerous computer-generated reports and custom analysis that contained actionable conclusions.

- * *Cost savings*, since the labor associated with compiling data and reaching respondents is lower than with other methods—even lower than direct mail.

Overcoming Respondent Objections

For a questionnaire to succeed, it is essential to motivate an accurate and complete response on the part of the respondent. *Filter questions* are useful to measure familiarity and past experience on the topic; this can significantly reduce uninformed responses.

Ultimately, completing a questionnaire should be a positive experience for the respondent. The ideal questionnaire

- requires minimal effort,
- looks professional,
- appears to serve a legitimate purpose,
- delicately handles any sensitive information.

Question Structure

Questionnaire content design falls into two main categories⁴: closed- and open-ended questions.

Closed-ended questions specify the set of responses as well as their format. Closed-ended questions include multiple choice, dichotomous (only two choices, usually yes/no), or a scale (questions where the choices are ranked). Closed-ended questions maximize the ease of coding Responses and improve respondent cooperation. However, it is important for multiple choice questions to include a variety of options in order to cover the full range of possible alternatives.

Closed-ended questions can pose a challenge since respondents sometimes check an alternative simply because it occupies a certain position on the list; this is called *order bias*. To minimize the occurrence of order bias, questionnaires can include multiple versions of the same question, which changes the order of the alternatives.

Open-ended questions allow respondents the freedom to answer in their own words. These questions help identify underlying motivations and aid in the interpretation of closed-ended questions. Open-ended questions are also well suited to an online environment, where respondents can reply in the comfort of their own homes.

Question Wording

An improperly worded question can have disastrous consequences. When a question is not understood by the respondent or not interpreted properly, it may lead to frustration, non-response, or survey abandonment. In order to avoid this, experienced researchers clearly define the issue being addressed, and then craft

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the question in clear language with simple positive or negative statements. Then, the question is far less likely to lead the respondent with biased statements.

Question Arrangement

Three types of information must be taken into consideration when determining proper question orders.

- **Basic information** corresponds directly to the research problem.
- **Classification information** comprises socio-economic and demographic information used to classify respondents in order to analyze results across different groups.
- **Identification information** includes any necessary contact information for the respondent.

All information must be organized in a logical manner, pertaining to topic areas, with difficult questions placed later in the sequence.

Pretesting Your Questionnaire

Pretesting questionnaires on a small sample group helps to identify and eliminate any potential problems. Pretest areas can include everything from question content and sequence, to overall design and usability. Personal interviews conducted after the questionnaire is completed help to assess the performance of a particular survey.

New Technologies: Engaging the User and Maximizing Response

The latest developments in online functionality present a wealth of new opportunities for questionnaire design. Online questionnaires simplify what was once a complex task by introducing the ability to personalize and skip unnecessary questions. Enhanced graphics, animation, sound and full-motion video allow the researcher to control the amount and frequency of stimuli available to each respondent. These technologies recreate product decision-making experiences that would normally require an onsite or lab environment, but are now easily accessed from the comfort of home.

Reducing Respondent Boredom

Some traditionally difficult survey methods are easier to conduct in an online environment.

Question branching, a technique where a respondent's answer to one question directs them to a specific set of follow-up questions, can be cumbersome and confusing in a printed questionnaire.

Branching Logic in Action: Bass Pro Shops

When Infosurv worked with Bass Pro Shops on a survey centered on brand awareness and company image, they employed branching logic and variable piping to create a fully customizable questionnaire format. As a result, Infosurv invited over 1.2M Bass Pro Shops customers to participate in this invaluable research, which led to a long-term relationship with the retail company.

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However in an online format, a process known as **branching logic** makes the transition appear seamless, displaying questions to the user that only apply to them. Additionally, a technique known as **variable piping** incorporates answers from previous questions to those later in the questionnaire.

Virtual Shelf and Flash Demonstrations



Virtual Shelf Screenshot

Virtual Shelf⁷ allows respondents to interact with a particular market or store, through a virtual shelf of choices. With all movements tracked, this type of process provides great insight into a consumer's decision-making process, without the real-world expense.

Flash-enabled demonstrations⁸ are another way in which respondents can virtually interact with a product. Whatever the product, respondents are able to look at colors, design, and placement even before the product has been manufactured. This enhances the timeframe in which market research is completed.

Getting More Actionable Information, More Affordably

When you apply the right expertise to questionnaire design, you can expect great results, including:

- Better, more organized data that can be analyzed for a variety of outcomes
- Clear direction in your data so you can make decisions with accuracy
- More complete questionnaires
- More responsiveness from your surveyed group

A professional questionnaire is one of the keys to a successful survey research strategy that leads to actionable information—the kind you can make decisions on with confidence. For more information about trends and issues in modern survey research, consult the two Infosurv Insider whitepapers on Survey Research Design and Survey Analysis Design.

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² Concepts presented here based on work created by Dr. Naresh K. Malhotra, Dr. Mark Peterson, *Basic Marketing Research: A Decision-Making Approach*: 288-289.

³ This example based on work created by Dr. Naresh K. Malhotra, Dr. Mark Peterson, *Basic Marketing Research: A Decision-Making Approach*: 292-293.

⁴ Concepts presented here adapted by Jared Heyman, President of Infosurv, based on work created by Dr. Naresh K. Malhotra, Dr. Mark Peterson, *Basic Marketing Research: A Decision-Making Approach*: 296-297.

⁵ Concepts presented here based on work created by Dr. Naresh K. Malhotra, Dr. Mark Peterson, *Basic Marketing Research: A Decision-Making Approach*: 302-305.

⁷ Virtual Shelf concept is a technology currently in use by Infosurv, Inc.

⁸ Flash-enabled demonstrations is a technology currently in use by Infosurv, Inc.

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Jared Heyman is the founder and president of Infosurv, a full-service market research firm specializing in design, administration, and analysis of online and telephone employee, customer, and other market research studies. He leverages years of marketing research expertise to build for his clients the high-value, actionable intelligence they are searching for to facilitate the success of their strategic-level decisions.

Jared Heyman is the one companies listen to when they are planning their own marketing initiatives. He is quoted as a marketing research industry expert in everything from trade publications such as Quirks and Marketing News, to marketing research blogs such as Web Analytics World, to major media outlets such as the Chicago Tribune. Marketing professionals often rely on Jared Heyman's keen insights into the marketing research industry.

Jared Heyman is a fourth-generation entrepreneur, with a lineage of successful start-up companies contained within the family scrapbook. Heyman administered his first market research survey while at Collective Technologies in 1998. It was this experience that made him realize that there was definitely room for improvement in the marketing research arena. Jared Heyman left Collective to launch Infosurv just months later.

With an initial startup cost of less than \$3K, Infosurv has since experienced exponential growth over the past nine years. Infosurv currently has a client base of over 200, including dozens of Fortune 500 and major government agencies, and continues to specialize in market research, customer surveys, employee surveys, and online surveys.

Jared Heyman graduated from the University of Texas at Austin with a BBA, double majoring in Business and Marketing Research. He also has an extensive international profile, with cultural experience in Greece, Turkey, Spain and Southeast Asia.

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