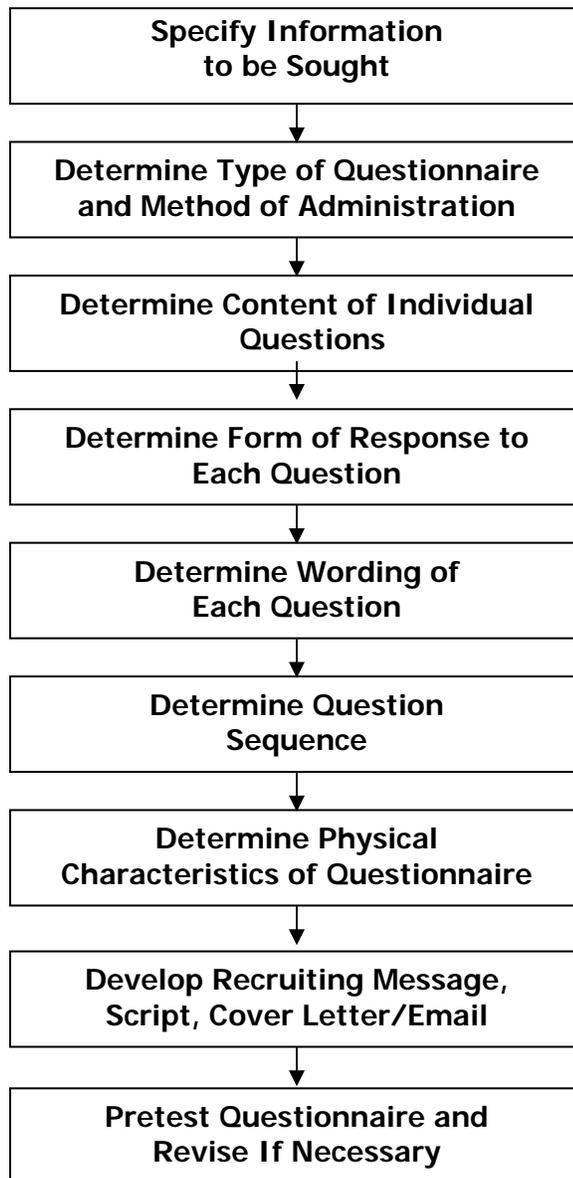


INTRODUCTION TO QUESTIONNAIRE DESIGN

A Questionnaire Can Be Used To Find Out About Several Factors

- ◆ past behavior
- ◆ future intentions
- ◆ attitudes and/or opinions
- ◆ demographics
- ◆ psychographics
- ◆ motivation
- ◆ awareness, trial and usage (ATU)
- ◆ knowledge
- ◆ importance
- ◆ satisfaction
- ◆ etc.

Steps in Developing a Questionnaire



Determining the Content of Individual Questions

- ◆ Is the question necessary?
- ◆ Are several questions needed instead of one?
- ◆ Do respondents have the necessary information? (May need to ask filter/screening question first.)
- ◆ Will respondents give the information?

Remember: A survey is only as good as the questions it asks.

Ways to Make a Sensitive Question Appear Less Threatening

1. Hide the question in a group of other, more innocuous questions
2. Before asking the specific question, state that the behavior or attitude is not unusual
3. Phrase the question in terms of others and how they might feel or act
4. State the response in terms of a number of categories that the respondent may simply check
5. Use the randomized-response model, in which the respondent answers one of several paired questions at random
6. Use a pivot question

Example of Pivot Question:

Is your total family income over or under \$50,000?

[IF UNDER \$50,000, ASK:] Is it over or under \$25,000?

[IF OVER \$50,000, ASK:] Is it over or under \$75,000?

- Under \$25,000
- \$25,001 - \$50,000
- \$50,001 - \$75,000
- Over \$75,000

QUESTION RESPONSE FORMATS

Response Formats

- Open-ended
- Closed-ended (Fixed Alternative Questions)
 - Dichotomous
 - Multichotomous (Multiple Choice)
 - Response Scales

Decisions About the Response Format

Open Ended Questions

Examples:

"What do you think of this new insecticide?"

"How old are you?"

"Who sponsors the Monday night football game?"

"Why did you purchase a Zenith brand color TV?"

Advantages

- Establish rapport
- Introduction to a topic
- Probing
- Insight

Disadvantages

- Poor for self-administered questionnaires
- Interviewer effects
- Time constraints
- Coding
- Talkative respondents

Closed Ended Questions: Dichotomous

Examples:

"Have you yourself used any insecticide during the past six months, or not?"

"Do you intend to purchase an automobile this year?"

"Do you think that gasoline will be more expensive or less expensive next year than it is now?"

Advantages

- Easy to administer
- Easy to code
- Easy to tabulate and analyze

Disadvantages

- Assuming the respondent sees a dichotomous world
- Question wording

Closed Ended Questions: Multichotomous

Examples

"In an average week, approximately how much money do you spend for food consumption outside the home?"

- Less than \$5.00
- \$5.01 - \$10.00
- \$10.01 - \$15.00
- \$15.01 - \$20.00
- More than \$20.00

"Why did you purchase a Zenith brand color TV? (Please check all that apply).

- Price was lower than other alternatives
- Feel it represents the highest quality overall
- Availability of local service
- Availability of service contract
- Good picture
- Good warranty
- Other (please specify) _____

Advantages

- Easy for interviewer and respondent
- Reduces interviewer bias
- Simple to tabulate and analyze

Disadvantages

- Effort in construction of answer categories
- Possible respondent bias
- Possible response bias

Questionnaire Wording

Use Concise Sentences

- Use simple sentences where possible. Use two or more short, simple sentences rather than one compound or complex sentence. Remember the 18 word rule!

Use Simple Words and Conversational Language

- When there is a choice between more difficult and simpler wording, it is best to keep the words simple.

Form 1

What emotions were evoked by perceiving the spectacle?

Form 2

What kinds of feelings did you have when you saw it all?

- Even simple words can sometimes cause confusion because of multiple meanings:
 - *about*
"About half of the United States population is male."
 - *all*
"Would you say that all cats have four legs?"
"Is the mayor doing all he can for the city?"
 - *always*
"Do you always observe traffic signs?"
"Is your boss always friendly?"
 - *and*
"Is there much rivalry among the boys who sell soda pop and cracker jacks?"

Use of Simple Words: Multi-Meaning Words (continued)

- *any*

"Do you think any word is better than the one we are discussing?"

- *bad*

"What things are bad about your job?"

- *ever*

"Have you ever listened to the Paul Harvey radio program?"

- *go*

"When did you last go to town?"

- *heard*

"Have you heard of the new allergy medicine?"

- *less*

"Compared with a year ago, are you more or less happy in your job?"

- *like*

"Do you think that leafy vegetables like spinach should be in the daily diet?"

- *you*

"How many radio sets did you repair last month?"

Avoid Ambiguous Words and Questions: Be as Specific as Possible

How often do you record programs for later viewing with your TiVo?

- Never
- Occasionally
- Sometimes
- Often

Alternative Form 1

How often do you record programs for later viewing with your TiVo?

- Never
- Approximately once a month
- Approximately once a week
- Almost every day

Alternative Form 2

Did you record any programs with your TiVo in the last two days?

- Yes
- No
- Can't Recall

Avoid leading questions (Cart before the Horse)

Leading questions suggest or imply certain answers.

Example 1:

Form 1

Many people are using dry cleaning less because of improved wash and wear clothes. How do you feel wash and wear clothes have affected your use of dry cleaning facilities in the past five years?

Use less No change Use more

Form 2

As compared to 5 years ago, do you use dry cleaning facilities more, less or about the same?

Less About the Same More

Example 2:

Form 1

Do small imported cars, such as Toyotas, get better gas mileage than small U.S. cars?

Form 2

Do small imported cars get better gas mileage than small domestic cars?

Example 3:

Form 1

To the best of your knowledge, was *Donkey Kong* made with the approval or under the authority of the people who produced the *King Kong* movies?

Form 2

Who makes *Donkey Kong*?

Avoid loaded questions

A loaded question suggests socially desirable answers or is emotionally charged.

Example 1:

Form 1

Do you advocate a lower speed limit to save human lives?

Form 2

Does traffic safety require a lower speed limit?

Example 2:

Form 1

We are happy when you like programs on Channel 7. We are sad when you dislike programs on Channel 7. What do you think of our programming?

Form 2

How would you evaluate the quality of programming on Channel 7?

Use Counterbiasing Statements

A counterbiasing statement is when an introductory statement or preamble to a potentially embarrassing question is used in order to reduce a respondent's reluctance to answer by suggesting that certain behavior is not unusual.

Examples

Some people have the time to brush their teeth three times daily; others do not. How often did you brush your teeth yesterday?

To help classify your answers, we'd like to ask you a few questions. Again, your answers will be kept in strict confidence.

Avoid Unstated Alternatives

An unstated alternative is one that is not expressed in the options provided in the question.

Example

Form 1

Do you think most manufacturing companies that lay off workers during slack periods could arrange things to avoid layoffs and give steady work right through the year?

63% said companies could avoid layoffs,
22% said they couldn't, and
15% had no opinion.

Form 2

Do you think most manufacturing companies that lay off workers in slack periods could avoid layoffs and provide steady work throughout the year, or do you think layoffs are unavoidable?

35% said companies could avoid layoffs,
41% said layoffs are unavoidable, and
24% expressed no choice.

Example

Form 1

Would you like to have a job, if this were possible?

81% said they would like to have a job
19% said they would not like to have a job

Form 2

Would you prefer to have a job, or do you prefer to be a stay-at-home mom?

32% said they would prefer to have a job
68% said they prefer to be a stay-at-home mom

Avoid Assumed Consequences (Use of Exhaustive Listing)

A question should be framed so that all respondents consider all relevant information as they respond. Assumed consequences occur when a question is not framed so as to clearly state the consequences, if any, and thus it generates different responses from different individuals who assume different consequences.

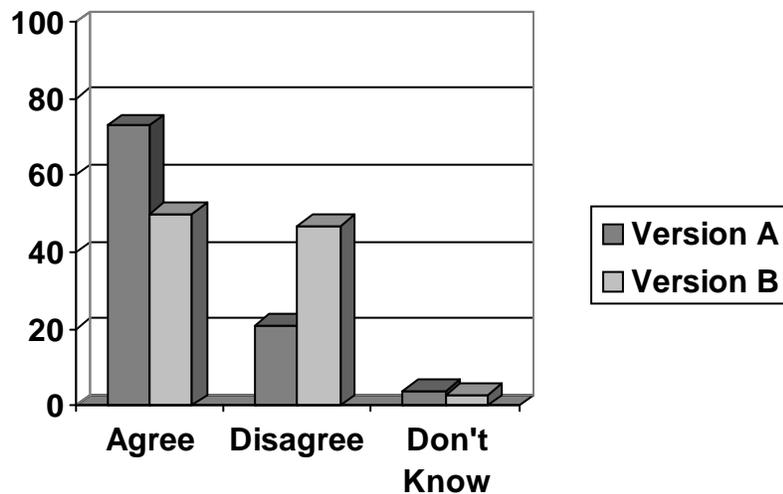
Example

Form A

It is a good idea to make a law requiring people to wear seat belts in automobiles.

Form B

There should be a law to make all people traveling in cars wear seat belts.



Example

Form A

Are you in favor of placing price controls on crude oil?

Form B

Are you in favor of placing price controls on crude oil if it would produce gas rationing?

Avoid Generalizations and Estimates

Questions should be asked in specific rather than general terms.

Form 1

How many salespeople called on you last year?

Form 2

How many salespeople called on you last week?

Avoid Double-Barreled Questions

Form 1

What is your evaluation of the price and convenience offered by catalog showrooms?

Form 2

What is your evaluation of the price offered by catalog showrooms?

What is your evaluation of the convenience offered by catalog showrooms?

Or Not?

Form 1

Are you satisfied with the service provided by your bank?

Form 2

Are you satisfied with the service provided by your bank, or not?

Consider the Strength of the Alternatives

The less extreme the choices are the more will be the commitments, while the farther apart the alternatives are the fewer will be the commitments.

Good idea -- Poor idea (mild, no commitment)
Prefer -- or Not (mild, but more personalized)
Approve -- Disapprove (mild, but suggests more consideration)
For -- Against (harsh, but action not necessarily implied)
Favor -- Oppose (harsh, suggests some action)
Vote For -- Vote Against (harsh, requires action)
Demand -- Reject (ouch!)

Can the Question Create the Answer?

Question Preceding Buying Interest Question	Percentage Respondents "Very Much Interested" In Buying New Product
No question asked	02.8%
Asked only about advantages	16.7%
Asked only about disadvantages	00.0%
Asked about both advantages and disadvantages	05.7%

EXHIBIT 13.7 Guidelines for Evaluating the Adequacy of Questions



1. Questions should be *simple* and *straightforward* whenever possible.
2. Questions should be *expressed clearly* whenever possible.
3. Questions should *avoid qualifying phrases* or *extraneous references*, unless they are being used as a qualifying (screening) factor.
4. *Avoid descriptive words* unless absolutely necessary.
5. The question/setups, attribute statements, and data response categories should be *unidimensional*, except when there is a need for a multiple-response question.
6. Raw data response categories (scale points) should be *mutually exclusive*.
7. The question/setups and the response categories should be *meaningful to the respondent*.
8. Question/scale measurement formats should *avoid arrangement* of response categories that *might bias* the respondent's answer.
9. Unless called for, question/setups should *avoid undue stress* of particular words.
10. Question/setups should *avoid double negatives*.
11. Question/scale measurements should *avoid technical* or *sophisticated language*, unless necessary.
12. Where possible, question/setups should be phrased in a *realistic setting*.
13. Question/scale measurements should be designed to *read logically*.
14. Question/scale measurements should always *avoid the use of double-barreled items*.

Source: Marketing Research: Within a Changing Information Environment, 3rd Edition (2006) – (ISBN: 0-072-83087-5). Authors: Joseph Hair, Robert P. Bush, and David J. Ortinau.

Determine Question Sequence

- ◆ Use simple and interesting opening questions
 - ◆ Use funnel approach
 - ◆ Use filter (or screening) questions when applicable
 - ◆ Design branching questions with care
 - ◆ **Ask for classification information last**
 - ◆ Place difficult or sensitive questions late in the questionnaire
-

Some Specifics about the Questions

- Earlier ones should be short, easy to answer, non-threatening
- They should build interest
- Rapport is important
- Flow through the questionnaire should be smooth
- Use transitional phrases
- General questions should lead, not follow
- Sensitive, difficult to answer, questions should not be used until well after the ice is broken and rapport established

Determine Physical Characteristics of the Questionnaire

The physical characteristics of the questionnaire can affect the accuracy of the replies that are obtained. It also can influence respondents' cooperation.

- ◆ Use good quality paper and a good copier (if you're printing many, consider having it printed rather than copied)
- ◆ Do not let the questionnaire appear too cluttered – too much on a page can be intimidating
- ◆ If possible, keep a paper survey to a single page printed on front and back
- ◆ If you must use branching questions, make certain the instructions are clear – arrows are often effective
- ◆ Use the graphics available in word processing software to improve the appearance of the survey (shadowing, lines, boxes, etc.) – e.g. the wingdings font with the lower case letter q produces a great looking check box (☐)
- ◆ Numbering of questions can be used but consider breaking your survey into sections so there never appears to be too many questions
- ◆ Include the name of the sponsoring organization and the name of the project (if possible) on the first page to lend credibility to the study

Recruiting Message, Script or Cover Letter/Email

- ◆ With personal and telephone interviews, the opening script used to recruit potential respondents is generally your only chance to secure participation.
 - This means the script needs to be carefully developed
 - It needs to sound as natural as possible (no one likes to hear someone reading or reciting a “canned” presentation to them)
- ◆ With non-personal methods of administration (online, mail, etc.), it is even more difficult to encourage participation
 - Typically cover letters/emails are used
 - Most important things to communicate:
 - Who you are
 - Why you are contacting them
 - Your request for their help in providing information
 - How long it will take
 - That their responses will be anonymous and/or confidential (only say this if it is true)
 - Any incentives they will receive for participating

Contents of and Sample Cover Letter for a Mail Questionnaire

PROFESSIONAL MAIL SURVEYS COMPANY
7432 East Court Avenue
Elveron, California 90101
(213) 991-5550

Comment [ADS1]: Sender's organization

Date

Recipient's address:

Dear Mr. Smythe:

Comment [ADS2]: Personal communication

Will you do us a favor?

Comment [ADS3]: Asking for a favor

We are conducting a nationwide survey among executives and managers in the metalworking industries. The purpose of this research is to find out the opinion of yourself and other experts on the advantages and disadvantages of using three new steel products. Your answers will enable steel manufacturers to be aware of the requirements of the users and the opinions of nonusers of these items, and this in turn will help them to design the products you need.

Comment [ADS4]: Importance of the recipient

Your name appeared in a scientifically selected random sample. Your answers are very important to the accuracy of our research, whether or not your company is a user of one or more of the products described.

Comment [ADS5]: Purpose of the research project

Comment [ADS6]: Importance of the replies in general

Comment [ADS7]: Importance of the replies when the reader is not qualified to answer most questions (if applicable)

It will take only a short time to answer the simple questions on the enclosed questionnaire and to return it in the stamped reply envelope. *(if you are enclosing one)*

Comment [ADS8]: How the recipient may benefit from this research

Comment [ADS9]: How recipient was selected

Comment [ADS10]: See ADS6 & ADS7

Of course all answers are confidential and will be used only in combination with those of other metalworking executives and managers from all over the United States.

Comment [ADS11]:

Comment [ADS12R11]: Completing the questionnaire will only take a short time

If you are interested in receiving a report on the findings of this research, just write your name and address at the end of this questionnaire, or if you prefer, request the results of the Survey on Steel Products in a separate letter. We will be glad to send you a complimentary report when ready.

Comment [ADS13]: The questionnaire can be answered easily

Comment [ADS14]: A stamped reply envelope is enclosed

Please return the completed questionnaire to the address above at your earliest convenience. *(NOTE: if you're enclosing SASE, write: "Please use the enclosed envelope to return the survey")*

Comment [ADS15]: Answers are anonymous or confidential

Comment [ADS16]: Offer to send report on results of survey

Thank you for your help.

Comment [ADS17]: Note of urgency

Comment [ADS18]: Appreciation of sender

Sincerely,

James B Jones

Comment [ADS19]: Personal communication

James B. Jones, Director
Professional Mail Services Company

Comment [ADS20]: Importance of the sender

P.S. The enclosed dollar bill is just a token of appreciation.

Comment [ADS21]: Description and purpose of the incentive

Special Considerations: Telephone Questionnaires

In a telephone questionnaire

- The first few seconds are critical
- The questions must be conversational
- Questions cannot be condescending
- Questions cannot be too involved
- Length is important
- Initial interest is a must

Questionnaire Development: Final Considerations

In reviewing your questionnaire, you should ask yourself the following:

- Does the question state the criterion for answering?
- Is the question applicable to all respondents?
- Does the question contain an example that is also a possible answer?
- Does the question require respondents to remember too much detail or recall distant events?
- Is the question as specific as it can reasonable be?
- Are some of the words in the question ambiguous, or, can words be interpreted in different ways?
- Is the question as free from threat to the respondent as possible?
- Does the question address only one issue?
- Does the question lead respondents toward a particular answer?
- Is the question “loaded” with a reason for responding in a particular way?
- Is the vocabulary understandable by all respondents?
- Is the question too complex?

1. Determine the *information objectives* and the *number of information flowerpots* required to meet those objectives.
2. Determine the *specific data requirements* (i.e., the size) for each information flowerpot, and stack the pots from *largest to smallest*.
3. Introduction section should include a *general description* of what the study is pertaining to; this may well be in a *disguised format*.
4. All types of *instructions*, if necessary, should be given *clear expression*.
5. Perhaps most important, the *question/scale measurements* have to follow some *logical order*—that is, an order that appears logical to the respondent rather than to the researcher or practitioner.
6. Begin an interview or questionnaire with *simple questions* that are easy to respond to, and then *gradually lead up* to the more difficult questions. *Create a general-to-specific data flow*.
7. Postpone *highly personal questions* (state-of-being data) *until late* in the interview or survey (i.e., place in the base after the last information flowerpot).
8. Place questions that *involve psychological tests* (i.e., lifestyle beliefs) toward *the end* of the interview or survey, but before the identification base.
9. *Do not ask too many questions of the same measurement format* (i.e., nominal, ordinal, interval, ratio scale formats) in sequence.
10. *Taper off* an interview or survey with a *few relatively simple questions* that do not require extensive thoughts or expressions of feelings (i.e., the demographic data questions are very appropriate here).
11. Always *end the interview* or survey with the *appropriate thank-you statement*.

Source: Marketing Research: Within a Changing Information Environment, 3rd Edition (2006) – (ISBN: 0-072-83087-5). Authors: Joseph Hair, Robert P. Bush, and David J. Ortinau.