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MGT 419

Readings on:
Questionnaire Formulation

From:
Burns/Bush Marketing Research, 5th ed.

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THE FUNCTIONS OF A QUESTIONNAIRE

A questionnaire poses the survey questions to respondents.

A **questionnaire** is the vehicle used to pose the questions that the researcher wants respondents to answer. Surely, you appreciate that questionnaires are important elements in surveys, but it might surprise you to learn that a questionnaire serves six key functions. (1) It translates the research objectives into specific questions that are asked of the respondents. (2) It standardizes those questions and the response categories so every participant responds to identical stimuli. (3) By its wording, question flow, and appearance, it fosters cooperation and keeps respondents motivated throughout the interview. (4) Questionnaires serve as permanent records of the research. (5) Depending on the type of questionnaire used, a questionnaire can speed up the process of data analysis. Online questionnaires, for example, can be transmitted to thousands of potential respondents in seconds. In the case of WebSurveyor, questionnaires can be delivered and returned online. Some printed questionnaires may be designed to allow respondents' responses to be scanned into a statistical package. (6) Finally, questionnaires contain the information on which reliability assessments may be made, and they are used in follow-up validation of respondents' participation in the survey. In other words, questionnaires are used by researchers for quality control.

Given that it serves all of these functions, the questionnaire is indeed a very important ingredient in the research process. In fact, studies have shown that questionnaire design directly affects the quality of the data collected. Even experienced interviewers cannot compensate for questionnaire defects.[2] The time and effort invested in developing a good questionnaire are well spent.[3] As you will soon learn, questionnaire development is a systematic process in which the researcher contemplates various question formats, considers a number of factors characterizing the survey at hand, and ultimately words the various questions very carefully. Questionnaire design is a process that requires the researcher to go through a series of interrelated steps.

THE QUESTIONNAIRE DEVELOPMENT PROCESS

Questionnaire design is a systematic process that requires the researcher to go through a series of considerations.

As you will soon learn, **questionnaire design** is a systematic process in which the researcher contemplates various question formats, considers a number of factors characterizing the survey at hand, ultimately words the various questions very carefully, and organizes the questionnaire's layout.

Figure 11.1 offers a flowchart of the various phases in a typical marketing research survey. The first two steps in the flowchart have been covered in this book. We have expanded and highlighted the questionnaire design steps, so you can see that there are some specific activities the researcher must execute before the questionnaire is finalized. As you can see in Figure 11.1, a questionnaire will ordinarily go through a series of drafts before it is in an acceptable final form. In fact, even before the first question is constructed, the researcher mentally reviews alternative question formats to decide which ones are best suited to the survey's respondents and circumstances. As the questionnaire begins to take shape, the researcher continually evaluates each question and its response options. Changes are made, and the question's wording is reevaluated to make sure that it is asking what the researcher intends. Also, the researcher strives to minimize **question bias**, defined as the ability of a question's wording or format to influence respondents' answers.[4] We will elaborate on question development and the minimization of question bias very soon.

Question bias occurs when the question's wording or format influences the respondent's answer.

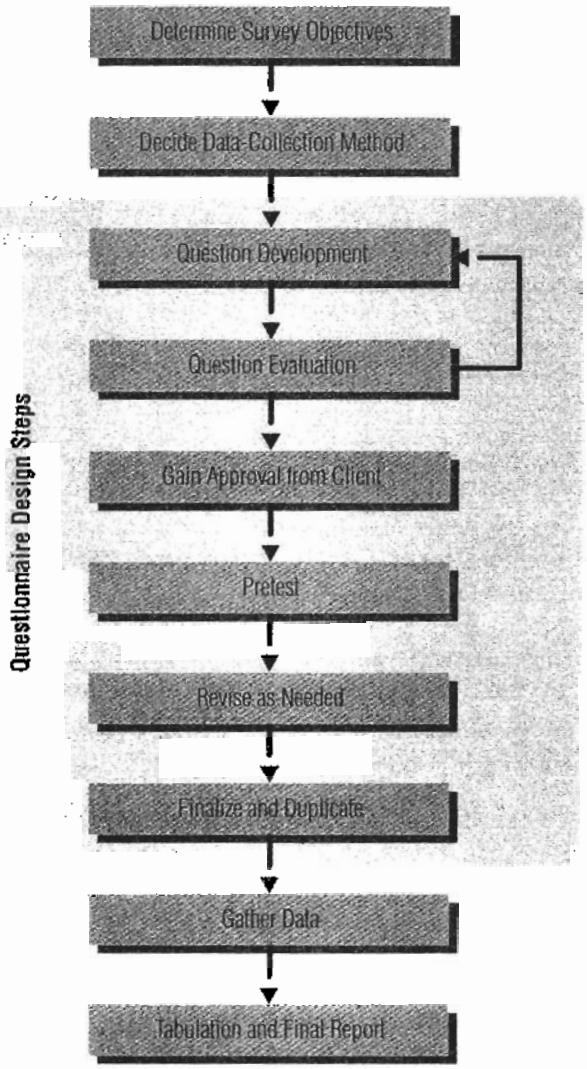

FIGURE 11.1
Steps in the Questionnaire Development Process

For now, it is important only that you realize that with a custom-designed research study, the questions on the questionnaire, along with the questionnaire's instructions, introduction, and general layout, are systematically evaluated for potential error and revised accordingly. Generally, this evaluation takes place at the researcher's end, and the client will not be involved until after the questionnaire has undergone considerable development and evaluation by the researcher. The client is given the opportunity to comment on the questionnaire during the client approval step, in which the client reviews the questionnaire and agrees that it covers all of the appropriate issues. This step is essential, and some research companies require the client to sign or initial a copy of the questionnaire as verification of approval. Granted, the client may not appreciate all of the technical aspects of questionnaire design, but he or she is vitally concerned with the survey's objectives and can comment on the degree to which the questions on the questionnaire appear to address these objectives. Following client approval, the questionnaire normally undergoes a pretest, which is an actual field test using a very limited sample to reveal any difficulties that might still lurk in wording, instructions, administration, and so on. We describe pretesting more fully later in this chapter.[5] Revisions are made based on the pretest results, and the questionnaire is finalized.

DEVELOPING QUESTIONS

Question development is the practice of selecting appropriate response formats and wording questions that are understandable, unambiguous, and unbiased.

Question development is the practice of selecting appropriate response formats and wording questions that are understandable, unambiguous, and unbiased. Marketing researchers are very concerned with developing research questions because they measure (1) attitudes, (2) beliefs, (3) behaviors, and (4) demographics,[6] and they desire reliable and valid answers to their questions. So, question development is a tall order, so to speak, but it is absolutely vital to the success of the survey. Here is a corny example to make our point that question development is very important. How would you respond to the following question that might appear on a questionnaire?

> Have you stopped trying to beat red traffic lights when you think you have the chance?
> Yes ___ No ___

If you say, "Yes," it means you used to speed up when the traffic light showed yellow, and if you say, "No," it means you are still taking chances. Either way, the conclusion is that everyone who took part in the survey drove or still drives dangerously. But, we all know that everyone is not a reckless driver now or in the past, so the question wording must be flawed, and it surely is.

Developing a question's precise wording is not easy. A single word can make a difference in how study participants respond to a question, and there is considerable research to illustrate this. For example in one study, researchers let subjects view a picture of an automobile for a few seconds. Then, they asked a single question, but they changed one word. They asked, "Did you see the broken headlight?" to one group of participants and asked, "Did you see a broken headlight?" to another group. Only the "a" and the "the" were different, yet the question containing the "the" produced more "don't know"and "Yes" answers than did the "a" question.[7] Our point is that as little as a one word in a question can result in question bias that will distort the findings of the survey. Unfortunately, words that we use commonly in speaking to one another sometimes encourage biased answers when they appear on a questionnaire. Table 11.1 lists our "Ten Words to Avoid in Question Development." Again, the point to remember is that while we use these words in everyday language, they can introduce an element of bias into a questionnaire when they are used and respondents are using a literal interpretation in their efforts to answer the questions.

Some words, when taken literally, introduce question bias.

As you can see by reading Table 11.1, it is important that questions do not contain subtle cues, signals, or interpretations that lead respondents to give answers that are inaccurate. Granted, not all respondents will be influenced by question wording, but if a significant minority is affected, this bias can cause the findings to be distorted or mixed, as you saw in our broken headlight study example. You should notice with the "better-wording" questions in Table 11.1 that these do not place respondents in the awkward position of answering to extreme absolutes. The better-wording questions give respondents latitude to respond in degrees (such as how often, how important, etc.) that are more consistent with their actual deliberations or actions than are the extreme-absolute-wording versions.

Four "Do's" of Question Wording

The researcher uses question evaluation to scrutinize a possible question for its question bias.

Question evaluation amounts to scrutinizing the wording of a question to ensure that question bias is minimized and that the question is worded such that respondents understand it and can respond to it with relative ease. As we noted earlier, question bias occurs when the phrasing of a question influences a respondent to answer wrongly or with other than perfect accuracy. Ideally, every question should be examined and tested according to a number of crucial factors known to be related to question bias. To be

TABLE 11.1 Ten Words to Avoid in Question Development: Example in a Survey Performed with Purchasers of Flat Screen TVs

Word[a]	Poor Wording	Better Wording
All	Did you consider all the options before you decided to purchase your flat screen plasma TV?	What options did you consider when you decided to purchase your flat screen plasma TV?
Always	Do you always buy electronics products from Gateway?	How often do you buy electronics products from Gateway?
Any	Did you have any concerns about the price?	To what extent was the price a concern for you?
Anybody	Did you talk to anybody about flat screen televisions before you made your decision?	Did you talk with someone about flat screen televisions before you made your decision?
Best	What is the best feature on your new flat screen plasma TV?	Please rate the following features of our new flat screen plasma TV on their performance for you using "poor," "fair," "good," or "excellent."
Ever	Have you ever seen a flat screen television?	Have you seen a flat screen television in the past 30 days?
Every	Do you consult *Consumer Reports* every time you purchase a major item?	How often do you consult *Consumer Reports* when you purchase a major item?
Most	What was the most important factor that convinced you it was time to make this purchase?	Please rate the following factors on their importance in convincing you it was time to make this purchase using "unimportant," "slightly important," or "very important."
Never	Would you say that you never think about an extended warranty when making a major electronics purchase?	How often do you consider an extended warranty when making a major electronics purchase?
Worst	Is the high price the worst aspect of purchasing a flat screen plasma TV?	To what extent did the high price concern you when you were considering your purchase of your flat screen plasma TV?

[a]Why avoid these words? The words are *extreme absolutes*, meaning that they place respondents in a situation in which they must either agree or disagree completely with the extreme position in the question.
Source: Adapted and modified from Payne, S. L. (1980). *The Art of Asking Questions*, 2nd ed. Princeton, NJ: Princeton University Press. (First printing, 1951).

sure, question evaluation is a judgement process, but we can offer four simple guidelines, or "Do's," for question wording. We strongly advise that you do ensure that the question is: (1) focused, (2) brief, (3) simple, and (4) crystal clear. A discussion of these four guidelines follows.

A question should be focused.

▶ **The Question Should Be Focused on a Single Issue or Topic.** The researcher must stay focused on the specific issue or topic.[8] For example, take the question "What type of hotel do you usually stay in when on a trip?" The focus of this question is hazy because it does not narrow down the type of trip or when the hotel is being used. For example, is it a business or a pleasure trip? Is the hotel at a place en route or at the final destination? A more

Long and unfocused questions confuse respondents.

focused version is "When you are on a family vacation and stay in a hotel at your destination, what type of hotel do you typically use?" As a second example, consider how "unfocused" the following question is: "When do you typically go to work?" Does this mean when do you leave home for work or when do you actually begin work once at your workplace? A better question would be "At what time do you ordinarily leave home for work?"

A question should be brief.

▶ **The Question Should Be Brief.** Unnecessary and redundant words should always be eliminated. This requirement is especially important when designing questions that will be administered verbally, such as over the telephone. Brevity will help the respondent to comprehend the central question and reduce the distraction of wordiness. Here is a question that suffers from a lack of brevity: "What are the considerations that would come to your mind while you are confronted with the decision to have some type of repair done on the automatic icemaker in your refrigerator assuming that you noticed it was not making ice cubes as well as it did when you first bought it?" A better, brief form would be "If your icemaker was not working right, how would you correct the problem?" One source recommends that in order to be brief, a question be no more than 20 words in length.[9]

A question should be grammatically simple.

▶ **The Question Should Be a Grammatically Simple Sentence If Possible.** A simple sentence is preferred because it has only a single subject and predicate, whereas compound and complex sentences are busy with multiple subjects, predicates, objects, and complements. The more complex the sentence, the greater the potential for respondent error. There are more conditions to remember, and more information to consider simultaneously, so the respondent's attention may wane or he or she may concentrate on only one part of the question. To avoid these problems, the researcher should strive to use only simple sentence structure[10]—even if two separate sentences are necessary to communicate the essence of the question. Take the question, "If you were looking for an automobile that would be used by the head of your household who is primarily responsible for driving your children to and from school, music lessons, and friends' houses,

how much would you and your spouse discuss the safety features of one of the cars you took for a test drive?" A simple approach is, "Would you and your spouse discuss the safety features of a new family car?" followed by (if yes), "Would you discuss safety 'very little,' 'some,' 'a good deal,' or 'to a great extent'?"

A question should be crystal clear.

▶ **The Question Should Be Crystal Clear.**[11,12] Forgive us for stealing a line uttered by actor Tom Cruise in his movie *A Few Good Men*, but it is essential that all respondents "see" the question identically. For example, the question "How many children do you have?" is unclear because it can be interpreted in various ways. One respondent might think of only those children living at home, whereas another might include children from a previous marriage. A better question is "How many children under the age of 18 live with you in your home?" One tactic for clarity is to develop questions that use words that are in respondents' core vocabularies; that is, the general public does not use marketing jargon such as "price point" or "brand equity," so it is best to avoid words that are vague or open to misinterpretation. To develop a crystal clear question, the reseacher may be forced to slightly abuse the previous guideline of simplicity, but with a bit of effort, question clarity can be obtained with an economical number of words.[13] One author has nicely summarized this guideline: "The question should be simple, intelligible, and clear."[14]

Question wording is difficult when the reseacher is conducting a survey in a foreign country. Many countries have unique cultures with completely different languages, and creating a questionnaire in the country's language is an exceptionally challenging undertaking.[15] There are, however, some general guidelines for researchers who find themselves engaged in global research projects. You will find these guidelines in Marketing Research Insight 11.1.

GLOBAL APPLICATION

11.1 Guidelines for Developing a Questionnaire in a Foreign Language

What about question wording in global marketing research situations, in which the researcher must create questionnaires that are in diverse languages? How can a manager avoid question bias when he/she does not speak the language of the respondents? For example, a researcher working with Delta Airlines might need to design a survey that has respondents who speak only one of the following languages: English, French, Spanish, Italian, Dutch, German, or Russian. One solution might be to design the questionnaire in some "universal" language, such as English, that many non-native English speakers can read; however, this approach is generally unsatisfactory because there are many opportunities for miscomprehension. Instead, global marketing researchers use the following steps[16] when attempting to do across-the-globe research.

- Create the questionnaire in the researcher's native language (e.g., English).
- Translate the questionnaire into the other language (e.g., German).
- Have independent translators translate it back into the native language (e.g., from German to English) to check that the first translation was accurate.
- Revise the questionnaire based on the "back translation" (into a better German version).
- If an online survey is involved, make sure that the letters and characters (such as Chinese, Japanese, or Arabic) are faithful to the language being used.
- Carefully pretest the revised questionnaire using individuals whose native tongue is the other language (e.g., natives of Germany).

Even with these precautions, there may be translation errors in which idioms or concepts do not translate well from one culture to the other.

Four "Do Not's" of Question Wording

There are four situations in which question bias is practically assured, and it is important that you learn these so you can avoid them or spot them when you are reviewing a questionnaire draft. Specifically, the question should not be (1) leading, (2) loaded, (3) double-barreled, or (4) overstated.

Do not use leading questions that have strong cues on how to answer.

▶ **The Question Should Not Lead the Respondent to a Particular Answer.** A **leading question** is worded or structured in such a way as to give the respondent a strong cue or expectation as how to answer.[17] Therefore, it biases responses. Consider this question: "Don't you see any problems with using your credit card for an online purchase?" The respondent is being led here because the question wording stresses one side (in this case, the negative side) of the issue. Therefore, the question "leads" respondents to the conclusion that there must be some problems, and, therefore, they will likely agree with the question, particularly respondents who have no opinion. Rephrasing the question as "Do you see any problems with using your credit card for an online purchase?" is a much more objective request for the respondent. Here the respondent is free—that is, not led—to respond "yes" or "no." Examine the following questions for other forms of leading questions:

As a Cadillac owner, you are satisfied with your car, aren't you?	This is a leading question because the wording presupposes that all Cadillac owners are satisfied. It places the respondent in a situation in which disagreement is uncomfortable and singles him/her out as an outlier.
Have you heard about the satellite radio system that everyone is talking about?	This is a leading question because it can condition the respondent to answer in a socially desirable manner. In other words, few people would want to admit they are clueless about something "everybody is talking about."[18]

Do not use loaded questions that have emotional overtones.

▶ **The Question Should Not Have Loaded Wording or Phrasing.** Leading questions are biased in that they direct the respondent to answer in a predetermined way. By contrast, loaded questions are more subtle, yet, they are also biased questions. Identifying this type of bias in a question requires more judgment, because a **loaded question** has buried in its wording elements that make reference to universal beliefs or rules of behavior. It may even apply emotionalism or touch on a person's inner fears. Some researchers refer to a loaded question simply as a "biased question."[19] For example, a company marketing mace for personal use may use the question, "Should people be allowed to protect themselves from harm by using mace as self-defense?" Obviously, most respondents will agree with the need to protect oneself from harm, and self-defense is an acceptable and well-known legal defense. Eliminating the loaded aspect of this question would result in the question "Do you think carrying a mace product is acceptable for someone who believes it is needed?" As you can see, the phrasing of each question should be examined thoroughly to guard against the various sources of question bias error; with the new wording we do not load the question by mentioning protection or self-defense.

Do not use double-barreled questions, which ask two questions at the same time.

▶ **The Question Should Not Be Double-Barreled.** A **double-barreled question** is really two different questions posed as one.[20] With two questions posed together, it is difficult for a respondent to answer either one directly.[21] Consider a question asked of patrons at a restaurant "Were you satisfied with the restaurant's food and service?" How do respondents answer? If they say "yes" does that mean they were satisfied with the food? The service? A combination? The question would be much improved by asking about a single item: one question for food and another question for service. Sometimes

double-barreled questions are not as obvious. Look at the following question designed to ask for occupational status:

____ Full-time employment
____ Full-time student
____ Part-time student
____ Unemployed
____ Retired

How does one who is retired and a full-time student answer the question? An improvement could be made by asking one question about occupational status and another about student status.[22]

▶ The Question Should Not Use Words That Overstate the Condition. An **overstated question** is one that places undue emphasis on some aspect of the topic. It uses what might be considered "dramatics" to describe the topic. Avoid using words that overstate conditions. It is better to present the question in a neutral tone rather than in a strong positive or negative tone. Here is an example that might be found in a survey conducted for Ray-Ban sunglasses. An overstated question might ask, "How much do you think you would pay for a pair of sunglasses that will protect your eyes from the sun's harmful ultraviolet rays, which are known to cause blindness?" As you can see, the overstatement concerns the effects of ultraviolet rays, and because of this overstatement, respondents will be compelled to think about how much they would pay for something that can prevent blindness and not about how much they would really pay for the sunglasses. A more toned-down and acceptable question wording would be, "How much would you pay for sunglasses that will protect your eyes from the sun's glare?"

Do not use overstated questions that use words that overemphasize the case.

To be sure, there are other question wording pitfalls, but if you use common sense in developing questions for your questionnaire, you will probably avoid them. For example, it is nonsensical to ask respondents: about details they don't recall (How many and what brands of aspirin did you see the last time you bought some?); questions that invite guesses (What is the price per gallon of premium gasoline at the Exxon station on the corner?); or to predict their actions in circumstances they cannot fathom (How often would you go out to eat at this new, upscale restaurant that will be built 10 miles from your home?).

Active **Learning**

Can you identify what is "bad" about a question and correct it? Here are some questions that might appear on a questionnaire. Each one violates one of the "do's" or "do not's" of question wording about which you just read. For each "Bad" question, write in what is bad about it; that is, decide on which "do" or "do not" is violated, and write a bettter version of the question that does not have the error in it.

Bad Version of the Question	What's the Error?	Good Version of the Question
How do you feel about car seats for infants?	_____	_____
When your toddler wants to ride in the car with you when you run errands or pick up your older children at school, practice, or some friend's home, do you use an infant car seat?	_____	_____
If using an infant car seat is not convenient for you, or when you are in a hurry and your toddler is crying, do you still go ahead and use the infant car seat?	_____	_____

(continued)

COMPUTER-ASSISTED QUESTIONNAIRE DESIGN

Computer-assisted questionnaire design is easy, fast, friendly, and flexible.

Computer-assisted questionnaire design refers to software programs that allow users to use computer technology to develop and disseminate questionnaires and, in some cases, to retrieve and analyze data gathered by the questionnaire. Several companies have developed computer software that bridges the gap between composing questions on a word processor and generating the final, polished version complete with check boxes, radio buttons, and coded questions. Also, most of these software programs allow users to publish their questionnaires on the Internet and enable respondents to enter data on the Internet. The data are then downloaded and made available for analysis, and practically all of these special-purpose personal computer programs generate data files that can be exported in Excel-readable format, which is a format that the Statistical Package for the Social Sciences (SPSS) can import.

The following paragraphs illustrate how these computer-assisted questionnaire design programs work. First, however, let us point out that there are at least four distinct advantages of computer-assisted questionnaire design software packages: They are easier, faster, friendlier, and provide significant flexibility beyond that available with a traditional word processor. Given this, here are descriptions of the basic functions of a computer-assisted questionnaire design program.

Questionnaire Creation

The typical questionnaire design program will query the user on, for example, the type of question, the number of response categories, whether multiple responses are permitted, if skips are to be used, and how response options will appear on the questionnaire. The survey-creation feature sometimes takes the form of a menu of choices, or it might appear as a sequence of format inquiries for each section of the questionnaire. Usually, the program offers a list of question types such as closed-ended, open-ended, numeric, or scaled-response questions. The program may even have a question library[40] feature that provides "standard" questions on constructs that researchers often measure, such as demographics, importance, satisfaction, performance, or usage. An advanced feature is an ability for the researcher to upload graphics files of various types if these are part of the research objectives. Most computer-assisted questionnaire design programs are quite flexible and allow the user to modify question formats, build blocks or matrices of questions with the identical response format, include an introduction and instructions to specific questions, and to move the location of questions with great ease. Often, the appearance can be modified to the designer's preferences for font, background, color, and more.

Some screen captures from WebSurveyor, with our annotations will show you how this software works. First, in Figure 11.2, you can see that WebSurveyor allows the user to build the questionnaire question-by-question and holds the questions in an easy-to-navigate scrolling menu window. In Figure 11.3 you will see a question editor window feature of WebSurveyor. The user selects a question type (such as select only one, select all that apply, etc.) and the appropriate WebSurveyor question editor window appears. In Figure 11.3, the matrix question format window is visible, and it creates a rating scale repeated for several categories. Here, the researcher has identified a number of features of a pizza delivery company, and each will be rated on its importance to the respondent. When the researcher has the questionnaire at a point at which the final, published version is to be previewed, WebSurveyor lets the user see what the online survey will look like. In Figure 11.4, you can see a "check all that apply" question, a specific numeric value response question, and part of the importance ratings scale question for the pizza delivery survey.

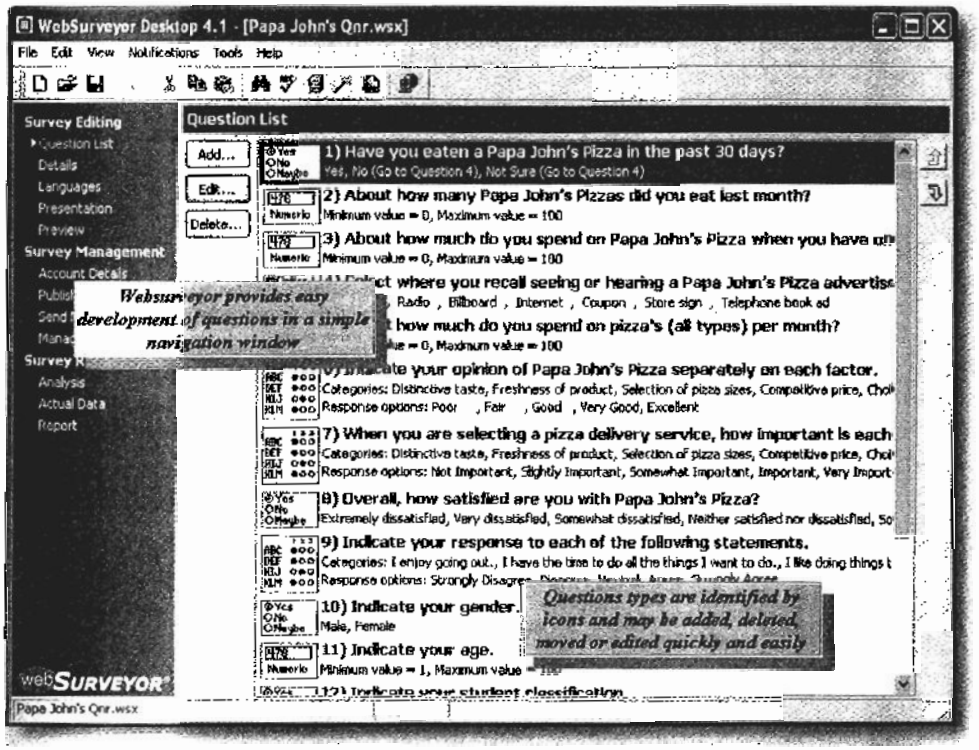

FIGURE 11.2
WebSurveyor Question Menu Window

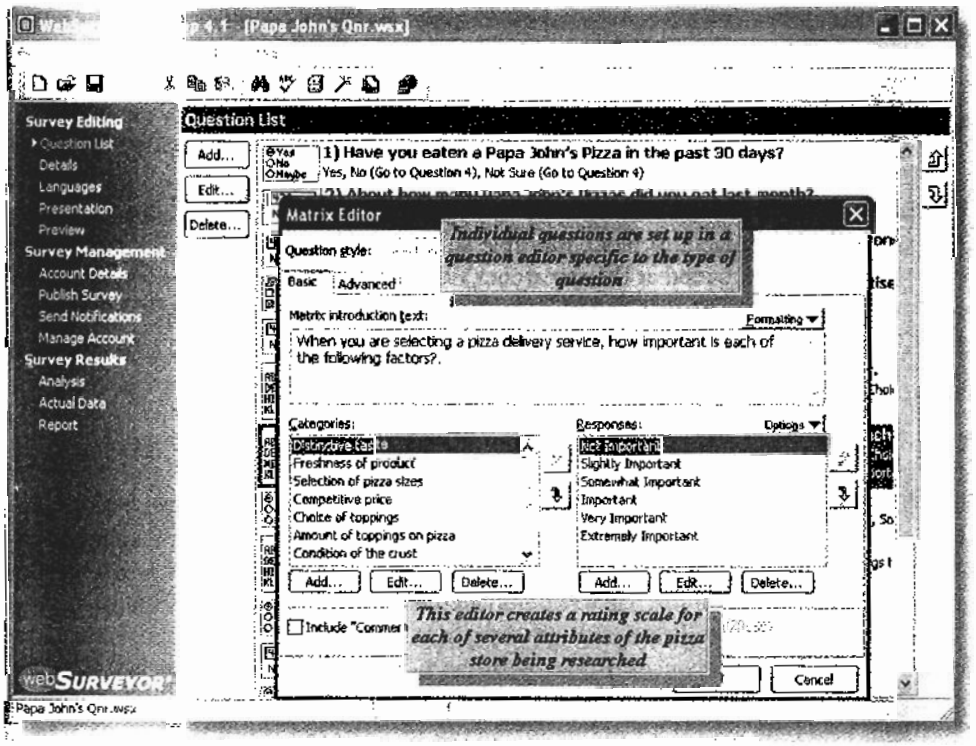

FIGURE 11.3
WebSurveyor Question Editor Feature

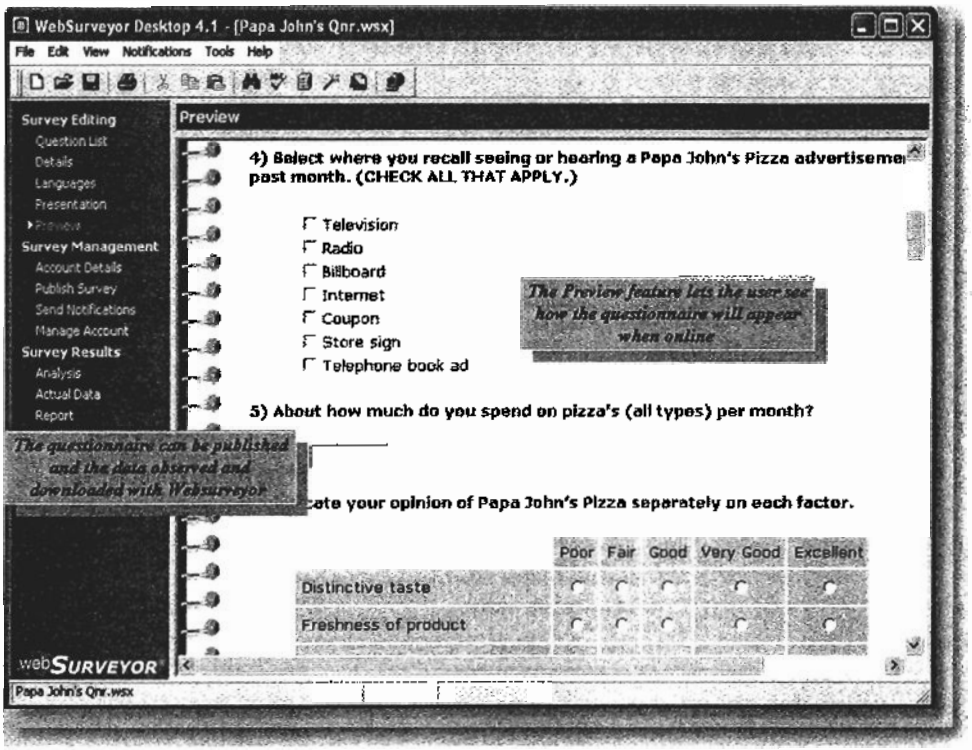

FIGURE 11.4
WebSurveyor Preview Feature

Data Collection and Creation of Data Files

Computer-assisted questionnaire design programs have question types, question libraries, real-time data capture, and downloadable data sets.

Computer-assisted questionnaire design programs create online survey questionnaires that are published on the Internet via a feature of the program. Once there, the survey is ready for respondents who are alerted to the online survey with whatever communication methods the researcher wishes to use. Normally, a data file is built as respondents take part, that is, in real time. To elaborate, each respondent accesses the online questionnaire, registers responses to the questions, and, typically, clicks on a "Submit" button at the end of the questionnaire. The submit signal prompts the program to write the respondent's answers into a data file, so the data file grows in direct proportion to and at the same rate as respondents submit their surveys. Features, such as requesting an e-mail address, are often available to block multiple submissions by the same respondent. The data file can be downloaded at the researcher's discretion, and, usually, several different formats, including Excel-readable ones, are available.

Data Analysis and Graphs

Many of the software programs for questionnaire design also have provisions for data analysis, graphic presentation, and report formats of results. Some packages offer only simplified graphing capabilities, whereas others offer different statistical analysis options. In fact, it is very useful to researchers to monitor the survey's progress with these features. The graph features vary, and some of these programs enable users to create professional-quality graphs that can be saved and/or embeded in word processor report files.

The advantages of online questionnaires are astounding; however, they should be treated with the precise concerns that researchers have in mind when designing questionnaires for other data-collection methods. In fact, as you will see by reading Marketing Research Insight 11.3, one marketing research professional who has a great

MARKETING

ONLINE APPLICATION

online research

11.3 How to Design a Winning Online Questionnaire by Using Best Practices

Online questionnaires afford immense advantages over questions used with other data-collection methods. The advantages of a tiny percent of the cost of telephone or mail surveys, savings of days and perhaps weeks in questionnaire design and implementation, returns in a matter of days instead of weeks, and the attractiveness of working with computer technology all combine to seduce a marketing researcher into making hasty and costly mistakes. Mr. Lee Smith, president of InsightExpress, an online research firm that has experienced great success in its field, recently listed a number of "best practices" for survey research.[41] As you will see as you read the following list of best practices, a number of them pertain to questionnaire design.

Here are Lee Smith's best practices for surveys that should be adhered to when designing and implementing online surveys:

- Carefully define the research objectives
- Make sure that the online population you will use is consistent with the respondents you wish to survey
- With respect to questionnaire length,
  - ☐ Keep it as short as possible
  - ☐ Start with a question that grabs the respondent's interest
  - ☐ The first questions should be easy to understand and easy to answer
  - ☐ Ask one thing at a time (that is, use focused questions)
  - ☐ Avoid questions that are biased (that is, not leading)
  - ☐ Avoid loaded questions
- Use invitations that gain cooperation
  - ☐ Use personalization, if possible
  - ☐ Remind the potential respondent of any relationship he or she may have with the sponsoring company
  - ☐ Tell the potential respondent why taking the time to answer the survey is worth his or her time
  - ☐ If incentives are to be used, experiment to find the one that gains the highest response rate as a reasonable cost
- Monitor the responses as they come in to ensure that the survey is working as expected, and, if not, make appropriate adjustments quickly

deal of experience with online surveys has written an article to remind marketing researchers that they should still adhere to the "best practices" of survey and questionnaire design when working with online surveys.

CODING THE QUESTIONNAIRE

A final task in questionnaire design is **coding** questions, which is the use of numbers associated with the question responses to facilitate data entry during data collection and data analysis after the survey has been conducted. The logic of coding is simple once you know the ground rules, and we have incorporated the basic rules of questionnaire coding in Table 11.4. The primary objective of coding is to represent each possible response with a unique number because numbers are easier and faster to enter into a computer file. Also, computer tabulation programs are more efficient when they process numbers.

SPSS Student Assistant: Codes are numbers placed with question responses to facilitate data entry and analysis.

SPSS

TABLE 11.4 Examples of Codes on the Final Questionnaire

1. Have you purchased a Papa John's pizza in the past month?

   ____Yes (1) ____ No (2) ____ Unsure (3)

2. The last time you bought a Papa John's pizza, did you (check only one):

   ____ Have it delivered to your house? (1)
   ____ Have it delivered to your place of work? (2)
   ____ Pick it up yourself? (3)
   ____ Eat it at the pizza parlor? (4)
   ____ Purchase it some other way? (5)

3. In your opinion, the taste of a Papa John's pizza is (check only one):

   ____ Poor (1)
   ____ Fair (2)
   ____ Good (3)
   ____ Very Good (4)
   ____ Excellent (5)

4. Which of the following toppings do you typically have on your pizza? (Check all that apply.)

   ____ Green pepper (0;1)
   ____ Onion (0;1)
   ____ Mushroom (0;1)
   ____ Sausage (0;1)
   ____ Pepperoni (0;1)
   ____ Hot peppers (0;1)
   ____ Black olives (0;1)
   ____ Anchovies (0;1)

   (Note: the 0;1 indicates the coding system that will be used. Typically, no precode such as this is placed on the questionnaire. Each response category must be defined as a separate question.)

5. How do you rate the speediness of Papa John's delivery service once you have ordered? (Circle the appropriate number.)

Very Slow	1	2	3	4	5	6	7	Very Fast

6. Please indicate your age: ____ Years (Note: No precode is used as the respondent will write in a number.)

7. Please indicate your gender.

   ____ Male (1) ____ Female (2)

Here are the basic rules for questionnaire coding:

- Every closed-ended question should have a code number associated with every possible response.
- Use single-digit code numbers, beginning with "1," incrementing them by 1 and using the logical direction of the response scale.
- Use the same coding system for questions with identical response options regardless of where these questions are positioned in the questionnaire.
- Remember that a "check all that apply" question is just a special case of a "yes" or "no" question, so use a "1" ("yes") and "0" ("no") coding system.
- Whenever possible, set up the coding system before the questionnaire is finalized.

Table 11.4 illustrates code designations for selected questions that exemplify our code system guidelines. As you can see, when words such as "yes" and "no" are used as literal response categories, codes are normally placed alongside each response and in parentheses. For labeled scales, we recommend that the numbers match the direction of the scale. For example, notice in question 3 in Table 11.4, that the codes are 1–5, and they match the Poor–Excellent direction of the scale. If we happened to have a 5-point Likert scale with Strongly Disagree to Strongly Agree response options in our questionnaire the codes would be 1–5. With scaled-response questions in which numbers are used as the response categories, the numbers are already on the questionnaire, so there is no need to use codes for these questions.

The codes for an "all that apply" question are set up as though each possible response was a "yes" or "no."

As you examine Table 11.4, notice that there is one instance in which coding becomes slightly complicated; but, again, once you learn the basic rules, the coding is fairly easy to understand. Occasionally, a researcher uses an **"all that apply" question** that asks the respondent to select more than one item from a list of possible responses. This is the case in question 4 in Table 11.4. With "all that apply" questions, the standard approach is to have each response category option coded with a 0 or a 1. The designation "0" will be used if the category is not checked, whereas a "1" is used if it is checked by a respondent. It is as though the researcher asked each item in the list with a yes/no response [e.g., Do you usually order green peppers as topping? ____ No (0) ____ Yes (1)], but by listing them and asking "all that apply," the questionnaire is less cluttered and more efficient.

As a final comment, we will point out that it is becoming less common for codes to actually appear on the final questionnaire as the marketing research industry moves further into the high-technology side of questionnaire design and administration. There is no need for codes to appear on the questionnaire using computer-assisted questionnaire design programs because the codes are embedded in the software instructions. Still, the researcher must know how to code the responses.

PERFORMING THE PRETEST OF THE QUESTIONNAIRE

Refer back to Figure 11.1, and you will find that before finalizing the questionnaire, one last evaluation should be conducted on the entire questionnaire.[42] Such an evaluation uses a pretest to ensure that the questions will accomplish what is expected of them. A **pretest** involves conducting a dry run of the survey on a small, representative set of respondents in order to reveal questionnaire errors before the survey is launched.[43] It is very important that pretest participants are in fact representative, that is, selected from the target population under study. Before the questions are administered, participants are informed about the pretest, and their cooperation is requested in spotting words, phrases, instructions, question flow, or other aspects of the questionnaire that appear confusing, difficult to understand, or otherwise a problem. Normally, from 5 to 10 respondents are involved in a pretest, and the researcher looks for common problem themes across this group.[44] For example, if only one pretest respondent indicates some concern about a question, the researcher probably would not attempt to modify its wording, but if three mention the same concern, the researcher would be alerted to the need to undertake a revision. Ideally, when making revisions, researchers should place themselves in the respondent's shoes and ask the following questions: "Is the meaning of the question clear?" "Are the instructions understandable?" "Are the terms precise?" and "Are there any loaded

A pretest is a dry run of a questionnaire to find and repair difficulties that respondents encounter while taking the survey.

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or charged words?"[45] However, because researchers can never completely replicate the respondent's perspective, a pretest is extremely valuable.[46]

SUMMARY

This chapter described questionnaire design and some of the activities that are involved in the questionnaire design process. We noted that questionnaires serve several functions. We also advocated that the designer follow a step-by-step development process that begins with question development and includes question evaluation, client approval, and a pretest to ensure that the questions and instructions are understandable to respondents. Certain words should be avoided in question wording, and we provided our "top 10" words that you should definitely avoid because these words are absolute extremes that force respondents to totally agree or totally disagree with the question. The objective of question development is to create questions that minimize question bias, and the four "do's" in question development stress that the ideal question is focused, simple, brief, and crystal clear. Question bias is most likely to occur when question wording is leading, loaded, double-barreled, or overstated.

The organization of questions on the questionnaire is critical, including the first statements, or introduction to the survey. The introduction should: identify the sponsor of the survey, relate its purpose, explain how the respondent was selected, solicit the individual's cooperation to take part, and, if appropriate, qualify him or her for taking part in the survey. We next provided general guidelines on the flow of questions on the questionnaire and pointed out the location and roles of screens, warm-ups, transitions, "difficult" questions, and classification questions. The chapter also introduced you to the notion of coding or placing the codes to be put in the computer data file on the questionnaire itself. In addition, we described WebSurveyor, a software system that performs questionnaire design, and the chapter briefly described the features of these programs. Finally, you learned the function of and details for pretesting a questionnaire.

KEY TERMS

Questionnarie (p. 300)
Questionnaire design (p. 300)
Question bias (p. 300)
Question development (p. 302)
Question evaluation (p. 302)
Leading question (p. 306)
Loaded question (p. 306)
Double-barreled question (p. 306)
Overstated question (p. 307)
Face validity (p. 308)
Questionnaire organization (p. 308)
Cover letter (p. 308)
Undisguised survey (p. 309)
Disguised survey (p. 309)
Incentives (p. 310)
Anonymity (p. 310)
Confidentiality (p. 310)
Screening questions (p. 311)
Question flow (p. 311)
Warm-up questions (p. 312)
Transitions (p. 312)
Skip question (p. 312)
Classification questions (p. 313)
Funnel approach (p. 315)
Work approach (p. 315)
Sections approach (p. 315)