Evaluation in Organizations

A Systematic Approach to Enhancing Learning, Performance, and Change

2nd Edition

Darlene Russ-Eft
Hallie Preskill

BASIC BOOKS
A Member of the Perseus Books Group
New York

Copyright © 2009 by Darlene Russ-Eft and Hallie Preskill
Published by Basic Books,
A Member of the Perseus Books Group

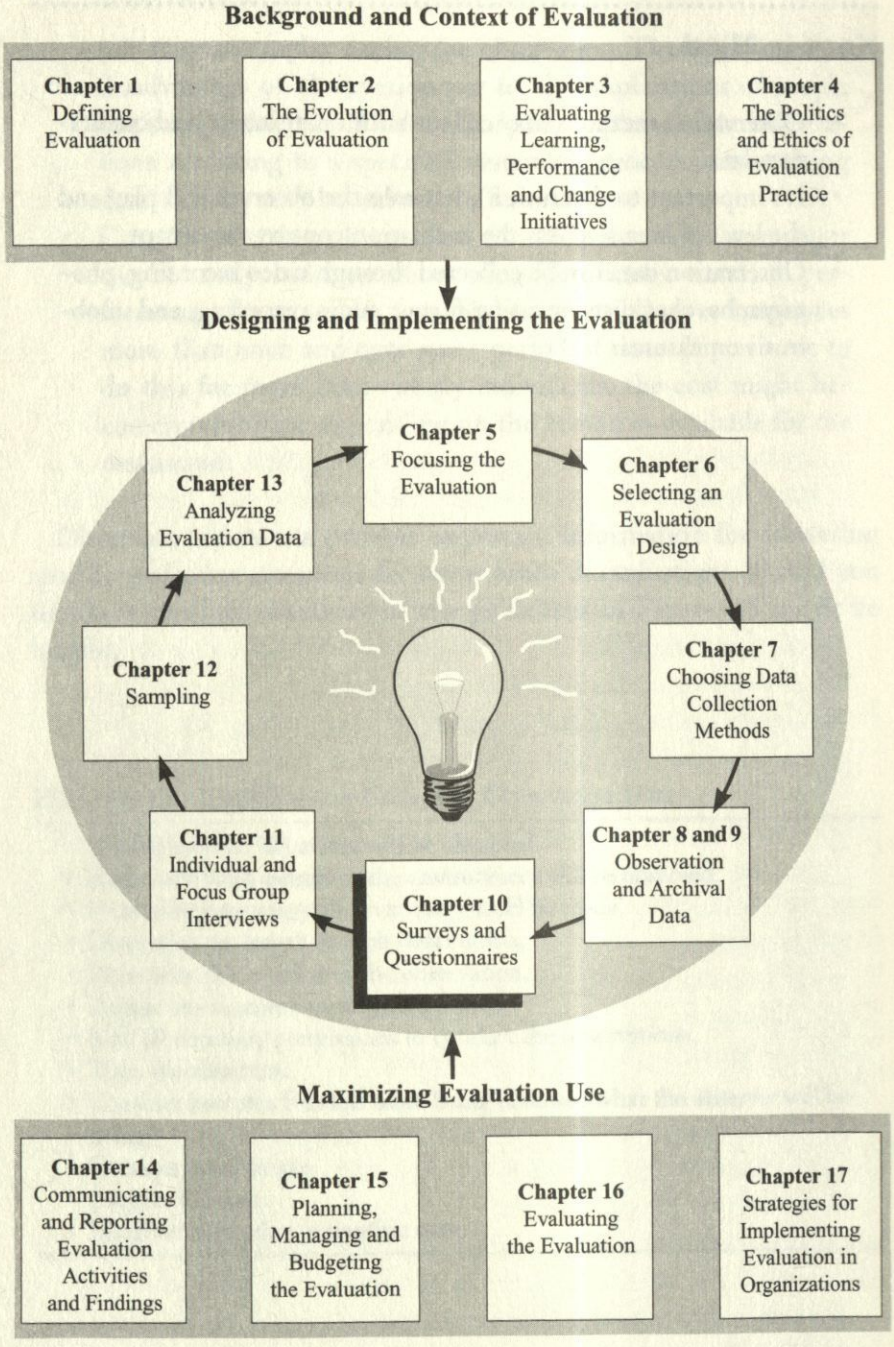
All rights reserved. Printed in the United States of America. No part of this book may be reproduced in any manner whatsoever without written permission except in the case of brief quotations embodied in critical articles and reviews. For information, address Basic Books, 387 Park Avenue South, New York, NY 10016-8810.

Books published by Basic Books are available at special discounts for bulk purchases in the United States by corporations, institutions, and other organizations. For more information, please contact the Special Markets Department at the Perseus Books Group, 2300 Chestnut Street, Suite 200, Philadelphia, PA 19103, or call (800) 810-4145, ext. 5000, or e-mail special.markets@perseusbooks.com.

Designed by Linda Mark

A CIP catalog record for this book is available from the Library of Congress.
ISBN: 978-0-465-01866-6

10 9


Background and Context of Evaluation
Chapter 1 Defining Evaluation
Chapter 2 The Evolution of Evaluation
Chapter 3 Evaluating Learning, Performance and Change Initiatives
Chapter 4 The Politics and Ethics of Evaluation Practice
Designing and Implementing the Evaluation
Chapter 5 Focusing the Evaluation
Chapter 6 Selecting an Evaluation Design
Chapter 7 Choosing Data Collection Methods
Chapter 8 and 9 Observation and Archival Data
Chapter 10 Surveys and Questionnaires
Chapter 11 Individual and Focus Group Interviews
Chapter 12 Sampling
Chapter 13 Analyzing Evaluation Data
Maximizing Evaluation Use
Chapter 14 Communicating and Reporting Evaluation Activities and Findings
Chapter 15 Planning, Managing and Budgeting the Evaluation
Chapter 16 Evaluating the Evaluation
Chapter 17 Strategies for Implementing Evaluation in Organizations

Chapter 10

Surveys and Questionnaires

- Types of Surveys
- Guidelines for Constructing Surveys
- Format Considerations
- Online and Web-Based Surveys
- Pilot Testing the Items and Surveys
- Summary of Steps in Survey Construction
- Logistics
- Handling Nonresponse Bias
- Managing the Data Collection Process

Vignette 7: The Wonderful World of Surveys at Community Acres Associates

Sarah Mendelson, manager of human resource development at Community Acres Associates, wanted to understand how well the new volunteer orientation training program was preparing volunteers to do their work. After talking with several managers, she developed a thirty-item survey. Since she wanted the participants to express their opinions about the training, most of the survey questions were open-ended. The survey was given to three sets of participants at the end of the daylong training workshop. They were asked by the trainers to drop it in a box on their way out of the building. When the surveys were collected from the box, Sarah learned that although nearly eighty surveys had been distributed, only ten people had completed and returned them. Another thirty surveys that were placed in the box were completely blank, and the remaining forty were missing.

Surveys and questionnaires are frequently used methods for gathering information within organizations. We've often heard learning, performance, and change professionals say, "Let's do an evaluation to determine the effectiveness of the program." Although this is a great first step, all too often the response has been, "Great, let's give them a survey!" without first considering what needs to be known and whether a survey is the most appropriate method. As a result, surveys and questionnaires may be the most overused and underdeveloped evaluation method.

Surveys consist of a predetermined set of questions that can be distributed through intranet and Internet sites, email, mail, fax, or handed to individuals. Though they are typically self-administered, they can also be read to respondents. (See Chapter 11 on individual and focus group interviews.) Tests and assessments represent other forms of a survey or questionnaire. Although the word *survey* generally refers to the method of data collection, the word *questionnaire* refers to the actual instrument. For clarity and consistency purposes, however, we will use the word *survey* throughout this chapter to denote both the method and the instrument, since this term is most frequently used in organizations.

Surveys make three assumptions: (1) the respondent can read (when in text form), (2) the respondent is both willing and able to provide truthful responses, and (3) if the respondent must search for the information, he or she will go through whatever records are necessary to provide a response. Regarding the first assumption, if the respondent cannot read, he or she would have to be willing to ask someone else to read and record his or her responses. With the second assumption, an item may require that the respondent not be afraid or embarrassed to provide an honest response. In addition, there is an assumption that the respondent can remember the needed information. Finally, with the third assumption, respondents must find it worth their time to search for the needed information. As the evaluator, you need to ask yourself whether the respondents are able and willing to do what is required to respond in a way that provides valid and useful information.

Given these assumptions, it is important to consider whether a survey is the best method for addressing the key evaluation questions. If you are gathering closed-ended responses to a small number of items from many different people in several locations, you may want to use

an intranet, Internet, email, or mailed survey. If, on the other hand, you are trying to gather information from people who have difficulty reading, you may want to use a data collection method that does not require reading. Or if people in the organization have received numerous surveys in the past months and feel "oversurveyed," you may want to consider another approach to data collection. Although a survey may collect useful information, it is not always the best method.

Advantages of Using Surveys

Using surveys as an evaluation data collection method offers several advantages. These include:

- Administration is comparatively inexpensive and easy even when gathering data from large numbers of people spread over wide geographic areas.
- The same questions are presented in the same manner to all respondents, with no interpretation on the part of the evaluator, thus reducing the chance of evaluator bias.
- Many people, particularly from the United States and western European countries, are familiar with surveys.
- Some respondents may feel more comfortable responding to a survey than participating in an interview.
- Tabulation of closed-ended responses is an easy and straightforward process.
- The use of surveys may increase the likelihood of obtaining a representative sample.

Disadvantages of Using Surveys

Like all data collection methods, surveys have limitations:

- Although you can distribute surveys to many people in several geographic locations, survey recipients may not complete them. As a result, surveys often result in low response rates, which threaten the external validity of the findings and the confidence one might have in using the results.

- Although the same questions are presented in the same manner, the items may not have the same meaning to all respondents, leading to problems with reliability and validity of the information.
- Because surveys depend on the respondents being able to read and answer in the language used in the survey, their use may limit the size or diversity of the sample.
- Given the lack of personal contact with the respondent, you may not know who completed the survey. If another person completes the survey, the results may lack internal validity.
- The data from surveys are limited in that you are unable to probe for additional details from the respondents.
- Good survey questions are hard to write; they take significant time to develop and hone.

For any evaluation, you must decide whether the benefits of surveys outweigh the costs (in terms of resources as well as disadvantages). However, you can identify creative methods for overcoming certain limitations. For example, if you find that critical data are needed but missing from a survey, you might consider conducting telephone or focus group interviews to supplement and expand on the survey data. Or you could provide incentives as a means for increasing the response rate.

Types of Surveys

Surveys are commonly used to evaluate learning, performance, and change initiatives because they can assess a wide variety of knowledge, skills, behaviors, attitudes, and opinions. The most frequently used types are:

- Postcourse reaction forms
- Behavioral or skill measures (or transfer-of-training/learning instruments)
- Employee satisfaction or organizational climate surveys
- Knowledge tests

TABLE 10.1 Reaction dimensions used in reactionnaires (n = 77)

Dimension Used	Number	Percentage (%)
Recommendation for program improvement	64	83.1
Overall evaluation	63	81.2
Planned action/transfer expectation	61	79.1
Instructor/facilitator	59	76.6
Program objectives/content	54	70.1
Program material	44	57.1
Instructional activities	38	49.4
Program time/length	34	44.2
Delivery methods/technologies	32	41.6
Training environment	25	32.5
Logistics/administration	13	16.9
Other: prior knowledge	9	11.7
Other: perceived gain	6	7.8
Other: expectation met	5	6.5

SOURCE: From Lee, S. H. 1998. "Making Reaction Evaluation a More Useful Tool in Evaluation of Corporate Training Programs: Reactionnaire Dimensions and Design Criteria." Ph.D diss., Indiana University, Bloomington. Reprinted with permission.

Postcourse Reaction Surveys

The most commonly used method for evaluating learning and performance activities or events involves the feedback forms often distributed at the end of a day or program. Typically, these include items asking for feedback on the quality of the instructional methods, facilities, materials, and instructors or facilitators. In a study of seventy-seven training reaction evaluations collected from U.S. corporations, Lee found that the following dimensions were represented on over 50 percent of the forms he reviewed: (1) recommendations for program improvement, (2) overall evaluation, (3) planned action/transfer expectations, (4) program objectives/content, and (5) program materials (1998; see Table 10.1).

All too often we have found that postcourse reaction forms are developed without much thought or concern, and as a result are so poorly designed that they provide useless data. In many cases, we have seen them used more symbolically as a means for managers and employees to say, "Yes, we do evaluate our learning, performance, and change initiatives."

In such cases, the forms end up in a drawer or garbage can and are rarely entered into a database or used in any tangible way. When this happens, we lose an important opportunity to collect useful information.

In most cases, postcourse reaction forms are distributed at the end of a learning, performance, or change workshop or session. To encourage everyone to respond, the facilitator may want to distribute the forms before the last part of the session. To encourage honest responses, the facilitator should also consider leaving the room while participants complete the forms. Although reaction forms can provide immediate and helpful feedback for program improvement purposes, these kinds of surveys may not necessarily substitute for other measures of effectiveness or impact of the learning, performance, and change initiative (Chapter 3).

Behavioral or Skill Measures

Another way of using surveys to evaluate learning, performance, and change initiatives gathers ratings of trainees' behaviors. Such surveys can be distributed to trainees, their managers, their subordinates, their peers, or some combination of one or more of these groups. If surveys are gathered from all of these groups, the results can be presented to individuals in the form of 360-degree feedback. When gathered and presented for individuals or groups, 360-degree feedback data can be used before the learning, performance, and change initiative as one way to determine needs. (See Ravishankar and Russ-Eft 1995 for more details on this method used as a needs assessment.)

Behavior surveys may also be used after a learning, performance, and change intervention under assumptions similar to using knowledge tests. By using such surveys after the initiative, you are assuming that participants did not possess these skills and behaviors prior to the initiative. When using a post-only survey, one option for comparing prior knowledge is to ask respondents to rate their pretraining skill level retrospectively and then rate the current skill level (Chapter 6).

Other times, behavioral or skill surveys are used both before and after a learning, performance, and change initiative as a way to determine the impact of the intervention. As with knowledge tests, you will need to decide whether to administer such measurements immediately after training or some days, weeks, or months later. This decision will depend on

the evaluation questions; namely, are you interested in determining immediate or longer-term changes? (See Taylor, Russ-Eft, and Chan 2005 and Taylor, Russ-Eft, and Taylor 2009 for meta-analytic studies examining pre- and postbehavioral data.)

Employee Satisfaction or Organizational Climate Surveys

It is possible that your evaluation includes questions focusing on the impact that a learning, performance, or change effort has had on employee satisfaction or the organization's climate. A survey may provide the most effective means for gathering this information. Here, you would need to decide whether to purchase a commercially available survey or develop one specifically for your organization. You would also need to decide on the frequency of data gathering (such as before and after the intervention or periodically) and the timing of each survey.

Knowledge Tests

Another commonly used method for evaluating learning and performance is a knowledge test. In some cases, the knowledge test takes the form of a certification exam. In other cases, particularly in computer-based training programs, the knowledge test can be embedded into the program to allow branching or skipping through sections of the material, or enabling the learner to exit the course and obtain some certification (assuming correct completion). Such tests can be an appropriate method for evaluating learning and performance initiatives if you are interested in knowing whether the trainees learned what was intended from the intervention.

You will need to decide whether to use a commercially available test or create your own. The advantage of commercially available tests is that, in most cases, there exists information as to the reliability and validity of the test. (See Chapter 7 on choosing data collection methods.) The disadvantage may be that available tests are too expensive to obtain, administer, and score or that they do not cover the needed knowledge. If constructing the test, you will need to allow enough time and resources to follow good test design principles.

Although knowledge tests can be used both before and after the program, they typically are only used after training. Using tests only after the course or workshop assumes that participants begin the program as "blank slates" or with no knowledge of the topic beforehand. You need to decide whether such an assumption is warranted. In addition, you need to decide whether you want to administer the tests at the end of training to measure immediate recall or whether you want to wait for some period to test long-term retention.

Note that knowledge tests typically don't provide sufficient information on how the learning and performance initiative might be improved. You may also want to check with your organization's legal department or management to make sure that knowledge tests or other kinds of exams are allowed.

Guidelines for Constructing Surveys

There are several issues to consider when designing a survey. What follows are several guidelines that may help guide your work.

Anonymity and Confidentiality

Issues of anonymity and confidentiality must be decided for each method of data collection. In the case of surveys, an anonymous response means that no one (even you as the evaluator) can identify who provided the survey data. Anonymity is difficult to ensure when using surveys, particularly when there is a need to follow up with nonrespondents or when the survey is administered via the Internet or an organization's intranet.

However, confidentiality can sometimes be provided to survey respondents. Confidentiality means that you may be able to identify the respondents and their responses, but you guarantee that this information will be given to no one else. If you do promise confidentiality to respondents, then you must consider all aspects of the evaluation, including data collection, data analysis, and reporting, in making this promise. In data collection and analysis, you may want to use an identifying number rather than the person's name. In such cases, you should inform potential respondents about the identifying number and its purpose in the cover letter. When communicating and reporting the

findings you must also take care to avoid the use of names or other identifying information. It is important to remember that violating a promise of anonymity or confidentiality is considered a breach of professional ethics. (See Chapter 4 on ethics.)

Types of Survey Questions

One of the first decisions to make when creating a survey involves the types of questions to be asked. These include questions that are (1) open-ended, (2) fill-in-the-blank, (3) dichotomous or two-choice questions, (4) multiple-choice, (5) rating scales, and (6) ranking. Consider the following four factors when choosing among the various question formats:

1. Who will be answering the questions? If the respondents have limited reading and writing ability, then they may not be able to effectively communicate their ideas, particularly to an open-ended question. Also, many respondents may not be interested in writing extensive responses to open-ended questions. This can be particularly true when the survey is administered at the end of the training session. Participants are typically eager to leave at that time and may provide short responses or no responses to open-ended items.

2. How much time will respondents be able and willing to spend? If people must respond quickly, they may not be willing to provide detailed responses. Or if the respondents have just completed a day-long learning experience or meeting, they will probably not want to devote much time to completing a survey. On the other hand, if the survey is given to people at the beginning of the training session, they may be more willing to complete a long survey (especially if accompanied by coffee and doughnuts). The only drawback to providing the survey at the beginning of the event is that some participants may rate things too early based on initial impressions and not go back to review their ratings at the end of the day.

3. How many respondents will be involved? If you plan to gather data from only ten people, you may want to use some open-ended questions, since the data analysis task will be more manageable with a small sample. If, on the other hand, you plan to gather data from a thousand people, you may want to use closed-ended questions, since they can be more easily tabulated. (See Chapter 12 on sampling.)

FIGURE 10.1 Examples of Open-Ended Survey Items

- What did you hope to learn from this workshop?
- What are three things you learned today that you plan to use tomorrow?
- How did employees' performance change as a result of the web-based course?
- If you were going to recommend this workshop to a colleague, what would you say?
- Please describe how a particular activity helped you learn one of the concepts covered in this program.
- What obstacles might you encounter when you try to apply this process in your organization?

4. How much is known about the range of possible answers, and do you want to provide them to the respondent? If you already know what the alternative responses are for a particular question, you may want to provide them in a multiple-choice type of question. For example, you may want to ask a preference question, such as: "Which of the three exercises did you prefer?" Since you probably are not interested in using this item to test respondents' recall of the exercises, you would simply list the three exercises.

The following section describes each of the seven question types.

1. Open-ended questions. Open-ended questions ask respondents to write a response using their own words, preferably in complete sentences. Examples of several open-ended questions can be seen in Figure 10.1.

Open-ended questions are particularly effective when you are uncertain as to the entire range of alternative answers, or you wish to obtain examples, stories, lists, or descriptions. Respondents' answers to open-ended questions often result in useful insights into their experiences, attitudes, values, and beliefs. A truly open-ended question should cause the respondent to stop and reflect. Although these questions may appear easy to construct, they require some effort to make sure that the results will be useful.

Although open-ended questions may result in rich and insightful information, they pose some challenges. First, it is important to carefully consider what needs to be known and then word the question carefully. For example, you should avoid asking vague and throwaway questions such as, "What did you like best/least about this program?" or "What would you change?" These questions are so generic or all encompassing that respondents often skip them or provide one-word answers that are difficult to interpret. Open-ended questions also require a significant

FIGURE 10.2 Examples of Fill-in-the-Blank Survey Items

- The first step when confronting an unconscious person is _____ _____.
- One of the four critical steps in selling is _____ _____.
- _____is the best word to describe this workshop.
- My plant location is _____.

effort during the data analysis stage. Since they produce text, these responses need to be analyzed differently than quantitative data. (See Chapter 13 on data analysis.) Another common problem in using open-ended questions is that respondents misinterpret the question because a set of choices is not available to guide their responses. Of course, the better worded the question is, the less likely this is to happen. One more concern is that when a survey includes many open-ended questions, as illustrated in the vignette presented at the beginning of this chapter, a lower response rate may be obtained since most people do not like having to write a lot on surveys (Preskill and Mullen 1988).

Given these challenges, limiting the number of open-ended questions to those where such information is critical is always a good idea. When considering the use of open-ended questions, you need to ask yourself two important questions: "Is it necessary to ask this as an open-ended question?" and "Are the alternative responses well-known and therefore better presented as a multiple-choice, rating, or ranking question?"

2. Fill-in-the-blank questions. Fill-in-the-blank questions typically ask the respondent to insert a word or number in a blank spot within a statement. Figure 10.2 shows examples of fill-in-the-blank-type questions.

Note that a fill-in-the-blank question is a variant of the open-ended question. In this case, however, you are asking for a limited number of words as a response.

Fill-in-the-blank questions have many of the benefits of open-ended questions: They are easy to construct and use; they allow for a range of alternative answers; and they can provide a richer source of information than a closed-ended question. Indeed, fill-in-the-blank questions are useful for identifying alternatives that can be used later in multiple-choice questions.

FIGURE 10.3 Examples of Two-Choice or Dichotomous Survey Items

- Would you recommend this software to a colleague?
  _____Yes
  _____No
- My organization could be called a learning organization.
  _____True
  _____False
- Employees value each other's opinions in this organization.
  _____Agree
  _____Disagree

The limitations of these kinds of questions are also similar to open-ended questions: They may involve time and effort for the respondent to create the response; they require a greater analysis effort than for closed-ended questions; and the respondent may misinterpret them.

3. Two-choice questions. Also known as dichotomous choice questions, these allow for choosing between two alternatives, such as those shown in Figure 10.3.

Unlike open-ended questions, two-choice questions enable a rapid response and permit fast and economical computer data analysis. They are most appropriate for questions that seek facts and when individuals have a clear-cut position, opinion, or view.

Sometimes, however, there are disadvantages to providing only two response options. Two choices, such as "yes-no" or "true-false," may not provide enough information to answer the evaluation's key questions. In the example described in Figure 10.3, we do not know whether the person would recommend the software to one colleague or all colleagues. We do not know whether the recommendation would go to only certain kinds of people. We also do not know *why* the person would make the recommendation. Is it because of the software's utility, cost, or ease of use?

When considering two-choice questions, you need to decide whether this type of question is appropriate or whether there are some other reasonable options. If so, then they must be stated as well. Furthermore, you also need to decide whether to include the response options "Don't know," "No answer," or "Not applicable." If these choices are not

FIGURE 10.4 Examples of Multiple-Choice Survey Items

- After the workshop, who provided you with the greatest assistance in applying what you learned back on the job? (Check only one.)

  _____ Trainer/facilitator
  _____ My peers
  _____ My supervisor
  _____ Other. Please specify _____

- Of the following teaching/training methods, which ones do you prefer? (Check all that apply.)

  _____ Lecture
  _____ Computer-based
  _____ Video
  _____ Group activities
  _____ Demonstration

- What is your organization's primary activity? (Check only one.)

  _____ Manufacturing
  _____ Education
  _____ Financial, real estate, insurance
  _____ Government, military
  _____ Health care
  _____ Retail, wholesale, distributor
  _____ Utilities, communications, transportation
  _____ Hospitality (food, lodging)
  _____ Other. Please specify_____

included, you may have some respondents leaving certain questions blank, and you will not be able to determine whether there was some reason for their nonresponse or whether the person simply skipped the question, either intentionally or by mistake. If respondents feel that they have to choose one point on the scale without having the option of not applicable, for example, they may provide invalid data because their response does not really reflect their opinion or attitude.

4. Multiple-choice questions. Multiple-choice questions provide respondents with several choices from which they are to select one or more responses. Figure 10.4 shows three examples of multiple-choice questions.

As with the two-choice questions, multiple-choice questions can be answered quickly and easily. Similarly, computer data entry and analysis is quick and straightforward.

To obtain valid information, however, the questions and their alternatives must be carefully worded. Furthermore, the full range of alternatives must be provided. One approach to obtaining a list of alternatives involves asking the question as an open-ended question or a fill-in-the-blank question first, with a limited number of respondents. You can then develop a list of the choices to use in surveying a large number of respondents later on.

With multiple-choice questions, you also need to decide whether it is reasonable to restrict the responses to the choices given. In addition, you must state clearly whether the respondent should *check only one* or *check all that apply*. As with two-choice questions, you should consider including a response option for "Don't know," "No answer," or "Not applicable."

5. Rating scale questions. A variant of the multiple-choice question is the rating scale. We will discuss the Likert-type scale, behaviorally anchored scales, and behavior-observation scales separately below.

5a. Likert-type scales. Renee Likert (1932) developed a scaling method in which the low end of the scale represents a negative response and the high end represents a positive response. Such a scale allows responses of varying degrees to each specific survey item. Examples of Likert-type scales can be seen in Figure 10.5.

As Figure 10.5 shows, the scales have an odd or even number of choices. With an odd-numbered scale, there is a midpoint that allows the respondent to choose a middle ground. So, if you wish to provide respondents with the neutral option of the midpoint, then you will choose an odd- numbered scale; with the even-numbered scale, such a neutral option or midpoint does not exist. In this case, the respondent has to choose one side or the other of the scale. The choice of whether to use an odd-or even-numbered scale depends on whether you wish to "force" respondents to one side of the scale or the other. However, keep in mind that some respondents will automatically choose the midpoint when it is available.

When responding to a Likert scale, some people feel compelled to put a mark somewhere in between numbers on the scale (for example, between

FIGURE 10.5 Examples of Likert-type Scale Survey Items and Response Options

1. How satisfied are you with how much you learned today?

Very Dissatisfied -2	Dissatisfied -1	Neither Satisfied nor Dissatisfied 0	Satisfied +1	Very Satisfied +2

2. Using this new process will increase my productivity.

Very Strongly Disagree 1	Strongly Disagree 2	Disagree 3	Neither Agree nor Disagree 4	Agree 5	Strongly Agree 6	Very Strongly Agree 7

3. How satisfied are you with the registration process?

Very Dissatisfied 1	Dissatisfied 2	Satisfied 3	Very Satisfied 4

4. The facilitator gave clear instructions for the group activities.

Strongly Disagree 5	Disagree 4	Neither Agree nor Disagree 3	Agree 2	Strongly Agree 1

the 2 and the 3). That is not possible with an intranet or Internet survey, but it may occur with email, faxed, or mailed surveys. When this happens, you will have to make one of the following choices before entering the data:

1. Make an arbitrary decision to score all the ratings in the same way (such as the higher of the ratings). You could, however, be accused of "manufacturing" the data.

2. Create a "new" point on the scale that is halfway between two of the ratings (such as 3.5). You are also "manufacturing" the data, but with potentially less impact on the results.
3. Do not enter any data for this item. Consider it missing data or invalid data. You can still use the rest of the survey items if the items are completed appropriately (preferred method).

You may also encounter respondents who mark two ratings. You can adapt the above options in these cases. We believe that ethical practice dictates choosing the third option and strongly recommend that you carefully consider the implications for interpreting a response that is different from that which was requested.

One decision you will have to make when using Likert-type scales involves the number of response options. The examples in Figure 10.5 show four, five, and seven Likert scale response options. Interestingly, research conducted by one of the authors (Russ-Eft 1986) found that increasing the number of options from three to five or from five to seven increases the variability of responses. That is, rather than having many people responding with a four on a five-point scale, people responded with a five or a six on a seven-point scale. The variability failed to increase, however, when moving from seven to nine options. Even when respondents were provided a wider range of options, they tended to confine their responses to only seven options. This means that respondents' answers are likely to cluster in one part of a scale as the number of options increases. The implication from her research is to limit Likert scales to no more than seven points.

Another decision involves whether to include descriptions for each point on the scale. This decision primarily depends on the number of options that you want to provide, the availability of nonoverlapping descriptions for each response, and participants' experiences with completing surveys. If you can provide descriptions for each point on the scale, it will help respondents know what their response really means—it decreases the ambiguity inherent in the scale. However, certain words have vague or similar meanings. Therefore, even though you provide a descriptor, different respondents may interpret the word differently. Thus choosing specific words for the response options on a Likert-type scale can prove difficult. Figure 10.6 shows several different descriptors.

FIGURE 10.6 Examples of Likert Scale Descriptors

Agree	Tend to Agree	Don't Know	Tend to Disagree	Disagree
Excellent	Very Good	Good	Fair	Poor
Very Important	Important	Neither Important nor Unimportant	Unimportant	Very Unimportant
Much Higher	Slightly Higher	About the Same	Slightly Lower	Much Lower
Far Too Little	Too Little	Enough	Too Much	Far Too Much
Very Dissatisfied	Dissatisfied	Neither Satisfied nor Dissatisfied	Satisfied	Very Satisfied
Always	Often	Sometimes	Seldom	Never
Very High	High	Moderate	Low	Very Low
None	Very Mild	Mild	Moderate	Severe
Never	Rarely	Sometimes	Usually	Always
Very Great Degree	Great Degree	Some Degree	Very Little Degree	None at All
Definitely	Probably	Not Sure	Probably Not	Definitely Not
A Great Deal	Above Average	Average	Not Too Much	Hardly Any
Very Ineffective	Ineffective	Neither Effective nor Ineffective	Effective	Very Effective
Not Important	Somewhat Important	Important	Very Important	Extremely Important
Not at All	To a Little Extent	To Some Extent	To a Great Extent	To a Very Great Extent
Much Worse than Expected	Worse than Expected	As Expected	Better than Expected	Much Better than Expected

FIGURE 10.7 Example of Behaviorally Anchored Survey Item

Sales Skills

Skillfully persuading prospects to join the military; effectively overcoming objections; closing skills.

Rating	Description
6	When prospect does not qualify for preferred program, recruiter talks the person into an alternate program, emphasizing available training.
5	When talking with a high school senior, recruiter mentions the names of others from that school who have enlisted.
4	When prospects qualify for only one program, recruiter conveys that it is a desirable program.
3	The recruiter states that the prospect can try for the preferred program, but because it will not be open for another month suggests taking a second choice.
2	The recruiter insists on showing brochures and files, even though the prospect indicated wants to sign up now.
1	When prospect states an objection to the military, recruiter ends the conversation.

Another important consideration for choosing scale descriptors is making sure that the descriptors reflect the dimension being explored in the question. Consider an item where the stem of the question reads, "Indicate the extent to which you agree with the following statements," and the descriptors are "Extremely Satisfied" to "Extremely Dissatisfied." Although the question seeks a level of agreement, the scale is measuring satisfaction. Inconsistency between the question stem and the response scale jeopardizes the validity of the answers.

A final decision involves the numerical value assigned and the direction of those numbers. According to Likert (1932) that decision is arbitrary, but the assignment must be consistent so that "favorable" is at one extreme and "unfavorable" is at the other extreme. Specifying numeric values along with the descriptors can simplify data entry, since statistical analyses require numerical data.

FIGURE 10.8 Examples of Behavior Observation Scale

→ Skillfully persuades prospects to join the military.

Almost Never				Almost Always
1	2	3	4	5

→ Effectively communicates the organization's vision.

Very Ineffective				Very Effective
1	2	3	4	5

→ Answers the phone stating the organization's name.

Almost Never			Almost Always
1	2	3	4

→ Gives regular feedback to employees.

Not at All			To a Very Great Extent
1	2	3	4

Likert-type scales are frequently used because they can be highly reliable and they can be adapted to measure many different phenomena. At the same time, as with any survey question, care must be taken to word them clearly and carefully and to consider the various choices in developing the scales. This will be discussed in a later section in this chapter.

5b. Behaviorally anchored scales. Behaviorally anchored rating scales were introduced by Smith and Kendall in 1963. The notion is that various levels on the scale are "anchored" into performance categories for a specific job category or position. Figure 10.7 provides an example of a behaviorally anchored scale.

FIGURE 10.9 Example of a Ranking Survey Item

Please rank the following list of today's activities in terms of their helpfulness in learning the program's content where,

1 = the activity that was most helpful in learning the content, and
4 = the activity that was least helpful in learning the content.

____ Picture This
____ Leaning on Friends
____ Unwelcome News
____ Sticking Together

One advantage of this kind of rating scale is that it is based on actual behavioral data. A second advantage is that it provides concrete examples for the respondents. These examples can, however, pose problems for some respondents who have difficulty matching their observations to the examples of behavior that are presented.

If you use this kind of scale for observing someone's performance, the instructions should direct the respondent to mark only one response. Yet in Figure 10.7, what would that person mark when a prospect qualifies for two or three programs and the recruiter indicates that all of those are desirable? Thus when using a behaviorally anchored rating scale, be sure to think about and possibly undertake a pilot to determine some of the issues that may arise for respondents.

5c. Behavior observation scale. An alternative to the behaviorally anchored rating scale is the behavior observation scale (Latham, Saari, and Fay 1979; Latham and Wexley 1981) (Figure 10.8).

This scale uses components of the behaviorally anchored and the Likert-type scales. Specifically, it uses the behavioral items from the behaviorally anchored scale, but it also uses the scale or rating options from the Likert-type scale. One major advantage to the behavior observation scale is that an extensive data collection effort is not required to determine the scale options, and it is based on a systematic analysis of the job. Another advantage is that it provides a listing of behaviors in concrete and explicit terms.

6. Ranking questions. Ranking is an effective question format when you want respondents to compare several things. The procedure asks the respondent to rank order the components of a list, as in Figure 10.9.

Ranking questions can be extremely helpful for identifying something as "best" or "worst." Nevertheless, a weakness of this format is that it results in only a ranking. That is, you only know that one thing is considered better or worse than another, and you have no information as to whether the respondent thinks that all the activities are "good" or "bad," for example. Moreover, ranking questions can be difficult to answer. An indication of the difficulty can be seen when respondents give the same rank to multiple choices (e.g., give a number 1 to two or more of the choices). A general rule of thumb is to limit the number of items to be ranked to ten.

FIGURE 10.10 Example of Paired-Comparison Survey Item

We would like to know which of today's four activities were most helpful in learning the program's content. For each pair of activities, indicate with an "X" the activity that was *most helpful* in learning the content.

1. Indicate which was most helpful:
   _____Picture This
   _____Leaning on Friends

2. Indicate which was most helpful:
   _____Picture This
   _____Unwelcome News

3. Indicate which was most helpful:
   _____Sticking Together
   _____Picture This

4. Indicate which was most helpful:
   _____Leaning on Friends
   _____Unwelcome News

5. Indicate which was most helpful:
   _____Unwelcome News
   _____Sticking Together

6. Indicate which was most helpful:
   _____Sticking Together
   _____Leaning on Friends

An alternative to ranking is the paired-comparison technique. In this case, the respondent is given only two things to rank at a time. Through successive pairings, one can obtain a ranking of the choices. Figure 10.10 shows what this looks like.

Paired comparison items are relatively easy for the respondent to answer, and they result in more reliable and valid data than simple ranking. However, as the list of items to be ranked increases, the number of pairings also increases dramatically. For example, with three items, the respondent would receive only three pairs to compare; however, with ten items, the respondent would have to compare forty-five items. To determine the number of pairings that would be necessary, you would calculate: 0.5*N*(N-1), where N equals the number of items. So, if you had eighteen items to be ranked, you would take half of eighteen, which is nine, and multiply that by eighteen minus one, which is seventeen. Nine times seventeen equals 153 pairs—respondents would have to rate 153 pairs of items. When considering this approach, keep in mind that the analysis of such pairings can be relatively complicated. (See Guilford 1954 and Preskill and Wentling 1984 for more details on the use of this method.)

7. *Constant sum questions.* A constant sum question asks the respondent to assign values to each of the options indicating the level of preference, interest, or importance. These values must sum to a specific amount, such as 100 percent, or twenty-four hours, or eight hours. As with the ranking type of item, the constant sum question can be difficult for respondents. Basically, as with a ranking, the respondent must continue to compare each of the options and the assigned values with the

FIGURE 10.11 Example of a Constant Sum Item

Please indicate how helpful today's activities were in learning the program's content by assigning a percentage. (The total must add up to 100%.)

____ Picture This
____ Leaning on Friends
____ Unwelcome News
____ Sticking Together

other options and assigned values. A constant sum question is typically most effective with an online survey, since the survey can reject responses that do not sum to the specified amount. Figure 10.11 provides an example of such an item.

Question Construction

The next step involves the actual writing of the survey question. In order to obtain valid information, it is important to word each question carefully. The following are some suggestions and cautions that can help you develop effective questions.

1. *Use terms that respondents will understand.* Although some terms may seem to be common, they may not be part of the respondents' vocabulary. For example, "human perfomance improvement" may be understood by you and others in your department but may not be clear to other people in the organization. If you think that some of the potential respondents may not understand a certain word, it is a good idea to choose another word or phrase, explaining the concept in simpler terms.
2. *Avoid acronyms.* You, your colleagues, and many employees may understand that "EAP" means "employee assistance program," but you may be administering the survey to new employees who have never encountered such a program. Always spell out the words of an acronym. Never assume anything.
3. A*void double negatives.* This is a hazard that occurs when you phrase a question in a negative way. As can be seen in the following example, the evaluator created a question respondents may find difficult to answer:

Do you believe that trainees should *not* have to pay for their own training? (Check one.)

☐ Yes
☐ No

By using the negative in the question, a response of "No" actually means, "Yes, I believe that trainees should pay for their own training." You can remove the problem by rewording the question:

Do you believe that trainees should pay for the training themselves? (Check one.)

☐ Yes
☐ No

4. *Avoid wording that suggests answers or biased responses in one direction*:

Isn't it true that our organization's new-hire orientation training should be improved? (Check one.)

☐ Yes
☐ No

This problem can be more subtle, as shown in the following example. Here the writer believes that training should occur at least weekly and fails to provide the option "None." As a result, few respondents will indicate that no safety training should be provided, whereas if such a response option were listed, some respondents might select that option.

How many times a week should safety training be provided? (Check only one.)

____Once a week
____Twice a week
____Three times a week

5. Avoid leading or loaded questions. A leading or loaded question is one that would lead the person to respond differently if the question had a different wording. This is a more subtle form of a biased question. Actually, any form of question could be considered leading or loaded; it could be loaded on one side or the other or it could be loaded evenly. The following is one example.

You are not alone if you think that the organization is not doing enough to support employees' professional development. Do you think the cap on tuition reimbursement shouldbe increased to $1,500 per year?

☐ Yes
☐ No

6. Avoid "double-barreled" questions that ask for more than one piece of information in the question. Such a question may result in the respondent

answering one part of the question and not the other. The following kind of question is a common example of this problem:

Was this seminar *interesting* and *useful*? (Circle one.)
____Yes ____No

How can participants answer the question if they found the seminar to be interesting but not useful? If you think that "interesting" and "useful" mean the same thing, then one of the two words should be eliminated. Otherwise, these should be made into two separate questions:

Was this seminar interesting? ____Yes____No
Was this seminar useful? ____Yes____No

As is probably clear by now, if we don't take the time to consider how survey items are worded, we are likely to obtain data that are either invalid or not usable. In the study conducted by Lee referred to earlier, he identified nine common errors on the seventy-seven reaction forms he studied. As can be seen in Table 10.2, the most common error that showed up on nearly 78 percent of the surveys reviewed was the use of double-barreled questions, whereas 36 percent had leading questions.

TABLE 10.2 Common Errors of Question Items in Reactionnaires (n = 77)

Guidelines Used for Assessment	Number	Percentage (%)
Double-barreled questions	60	77.9
Leading/loaded questions	28	36.4
Already know answer	16	20.8
Use nonneutral wording	13	16.9
Response category not mutually exclusive	13	16.9
Do not use simple, clear, and short words (KISS principle)	13	16.9
Not single purpose	12	15.6
Do not avoid jargon, slang, and abbreviations	4	5.2
Do not avoid negative and double-negative questions	1	1.3

SOURCE: From Lee, S. H. 1998. "Making Reaction Evaluation a More Useful Tool in Evaluation of Corporate Training Programs: Reactionnaire Dimensions and Design Criteria." Ph.D diss., Indiana University, Bloomington. Reprinted with permission.

Some might say that the development of good survey questions is as much an art as it is a science. With this in mind, we offer Figure 10.12 to illustrate the creation of a survey item.

FIGURE 10.12 The Creation of a Survey Item

Stage 1: Shouldn't there be a change in our existing sales training program?
____Yes
____No

? This question begs for an affirmative answer

Stage 2: Should there be changes in the existing sales training program?
____Yes
____No

? What kinds of changes would be needed?

Stage 3: Should there be more sales training?
____Yes
____No

? Does 'more' say what is intended?

Stage 4: Should there be more frequent sales training?
____Yes
____No

? Only one alternative is stated.

Stage 5: Should there be more frequent sales training, or is the existing sales training adequate?
____Yes, sales training should be more frequent
____No, existing sales training is adequate

? What if less sales training is desired?

Stage 6: Should there be more frequent sales training, less frequent sales training, or is the current frequency of sales training adequate?
____Should have more frequent sales training
____Should have less frequent sales training
____Current frequency of sales training is adequate

? What if no sales training is desired?

Stage 7: Should there be more frequent sales training, less frequent sales training, no sales training, or is the current frequency of sales training adequate?

____Should have more frequent sales training
____Should have less frequent sales training
____Should have no sales training
____Current frequency of sales training is adequate

? Sales training for which groups?

Stage 8: Should there be more frequent sales training for new hires and experienced staff, less frequent sales training, no sales training, or is the current frequency of sales training adequate?

____Should have more frequent training
____Should have less frequent training
____Should have no sales training
____Current frequency of sales training is adequate

? This is a "double-barreled question."

Stage 9: Should there be more frequent sales training for new hires, less frequent training for new hires, no sales training for new hires, or is the current frequency of sales training adequate?

____Should have more frequent training
____Should have less frequent training
____Provide no sales training
____Current frequency of sales training is adequate

? This is excessively wordy.

Final Question

Stage 10: For new hires, there should be:

____more frequent sales training
____less frequent sales training
____no sales training
____the current frequency of sales training

CAUTION: Now the question is ready for pilot-testing and further revision and refinement.

Format Considerations

Always consider the respondent population when developing the format or layout of survey questions. If employees have responded to past surveys using a particular format, you may decide to use that same format to avoid any confusion. On the other hand, the same format may lead to boredom and a lower response rate. This may be one reason for developing reverse-coded items. The following provides an example of items measuring introversion-extroversion:

I prefer to work alone. (Check one.)
____Strongly agree ____Agree ____Disagree ____Strongly Disagree

I prefer working with others. (Check one.)
____Strongly agree ____Agree ____Disagree ____Strongly Disagree

Presumably someone who strongly agrees with the first item would disagree or strongly disagree with the second item. However, if the respondent provides conflicting or contradictory responses, this might suggest that he or she was not paying attention, didn't understand the question, or was uncomfortable providing his or her real opinion. Such contradictory responses challenge the validity of the data. As a result, a decision would need to be made about the appropriateness of including these data in future analyses for these items.

Figure 10.13 shows two different format options. The first example is commonly used in surveys. Note that it requires the respondent to remember the scale and the responses. In contrast, the second one makes the scale more visible to the respondent and thus increases the likelihood that the respondent will answer the question more accurately.

A survey's format should be both simple and interesting. The following are some general formatting suggestions.

Formatting Suggestions for All Surveys

- If the survey is longer than one page, use an attractive welcome screen (for online surveys) or a cover page (for paper-based surveys). This may include the organization's logo and a title for the survey.

FIGURE 10.13 Example of More and Less Interesting Survey Formats

Answer the following questions by indicating one number between one and seven that best reflects what you do.

1 = Not at All
7 = To a Very Great Extent

To What Extent Do You:
1. Run effective meetings? ____
2 Model effective meeting management? ____
3. Focus attention on a few important issues? ____

Obtaining the same information with a more interesting format.

Answer the following questions by circling the number that best reflects what you do.

	Not At All			To Some Extent			To A Very Great Extent
To What Extent Do You:							
1. Run effective meetings?	1	2	3	4	5	6	7
2. Model effective meeting management?	1	2	3	4	5	6	7
3. Focus attention on a few important issues?	1	2	3	4	5	6	7

- Consider whether you want to include a letter, either emailed or paper, from you or from a sponsor of the evaluation (the person who has commissioned the evaluation).
- Include clear, brief instructions for completing the survey.
- Group items into logical sections; for example, by topic areas.
- Group items that have the same question format or response options.
- Include smooth transitions between sections on the survey.
- Provide clear directions at the beginning of each question or format change.

- Avoid placing threatening questions at the beginning of the survey. Threatening questions can include demographic questions that some respondents may think will identify them personally.
- Avoid putting the most important questions at the end of the survey in case some respondents do not complete the entire survey.
- Make sure to proofread, proofread, and proofread the survey before posting it online or mailing it.

For Online Surveys

- Use radio buttons when only one choice is needed; use check boxes when more than one response is allowed; use a drop-down menu with a lengthy listing of response options.
- If requiring respondents to answer each question, be sure to include an option of "don't know" or "not applicable." (Although this is helpful for both online and paper-based versions, it is critical for online, particularly when the respondent cannot proceed to the next question.)
- Use Arial or Times New Roman font, since they are similar in legibility and preference.
- Use 14-point font with children and older adults.
- Use images, graphics, charts, motion, sound, and links sparingly, as these tend to increase the download time.
- Consult the Web Access Initiative guidelines at www.w3.org/TR/WCAG10/#Guidelines to test the survey for accessibility.

For Paper-Based Surveys

- Use colored paper so that it stands out on someone's desk. Be careful, however, to avoid a color that is too bright or dark, thus making the survey difficult to read.
- Space items so that they do not appear cramped or crowded. It's better to have more space between items and more pages than fewer pages but difficult-to-read items.
- Number the items and pages.

- Place an identification code on each page of the survey so those pages can be identified if they are separated. However, be sure to let the respondents know in the cover letter that the survey is coded and why (especially if confidentiality has been promised).

Online and Web-Based Surveys

Evaluators are increasingly using computers to design and administer surveys (Dillman 2007; Ritter and Sue 2007; Sue and Ritter 2007). These surveys can be sent via email or can appear on a website. Using computers simplifies distribution and data collection and appears to yield results similar to paper-based surveys (Dillman 2007). Once the electronic version of the survey has been created, the survey can be administered to hundreds or thousands of people in various locations without additional costs. At the very least, you eliminate both printing and mailing costs. Responses to electronic surveys can be gathered more quickly because mailing delays do not occur. Furthermore, if the version has been created properly, the respondents enter their own data into the survey database, eliminating costs and time for data entry, and in some cases, analysis. In a recent example, one of the authors conducted a survey in Canada by posting it to a website. After potential respondents completed a short demographic survey—with the option of using English or French—those who met the respondent criteria were asked to continue with the full survey. The entire data collection and data entry effort was completed in a two-week period, as compared with a similar data collection effort using paper-and-pencil forms in the United States that lasted six weeks.

The use of electronic surveys, whether web-based or email, should be determined based on the population being surveyed. The major question to ask is whether the people selected for the sample regularly use email or the Internet. For example, the Pew Research Center (Sue and Ritter 2007) reported that in 2005, 70 percent to 72 percent of people in the Netherlands, Great Britain, Canada, and the United States were Internet users. At the same time, fewer than 20 percent of the people in Pakistan, Indonesia, India, and Russia used the Internet. In the United States, those over sixty-five years of age and those with less than a high school diploma showed very low levels of Internet use.

After deciding that a web-based or email survey is appropriate, you need to consider the length and complexity of the survey. Whether you should strive for a one-page survey is debatable. Some believe that too much scrolling on one page reduces response rates, while others believe that clicking to another page reduces response rates. If the survey contains skip patterns, then it will need to be more than one page. In any case, the shorter and the less complex the survey the higher the response rate.

Suggestions for improving an online survey's response rate include:

- Follow the same presurvey notification and follow-up processes as for mailed surveys.
- Use email for the presurvey and postsurvey notifications, rather than postcards or letters.
- In the prenote, indicate a nonelectronic way of requesting a paper-and-pencil version, such as a return postcard. Then when receiving such a notice from a respondent, send that person a paper-and-pencil version.
- Personalize the email messages sent to each respondent rather than using a group message or group address. Indeed, be sure to avoid sending such group messages. A respondent may inadvertently send his or her survey responses to the entire group.
- Be aware that browsers and servers possess encryption systems. You can ensure the security of the responses by using this technology.
- Be aware that an email survey may not look the same on each respondent's screen; the same may occur with certain web surveys. Differences will occur owing to differences in browsers and in computer configurations.
- Be sure to develop a method for validating the identity of the user and preventing multiple submissions.

In spite of the many advantages of email and web-based surveys, there are some issues to consider. With such surveys, you cannot guarantee, because you may not have control over, who has access to the computer on which the survey is taken. In addition, how often they are disseminated through an organization's intranet should be carefully considered. When an organization attempts to survey its members repeatedly on a particular

topic, employees might tire of the survey and find ways to avoid participating. The following is a true story.

In response to concern about the quality of its customer service, a company decided to monitor how employees felt about the level of customer service being provided. To do this, an online survey was developed and implemented for a period of two years. Every day, employees were sent a series of questions they had to answer before their email would open. After responding for quite a long time, one employee says she really didn't care how she responded . . . she just wanted to get to her email. After about six months, she discovered that if she pushed a series of keys, her response would be automatically entered, as "everything was perfect." She could then read and respond to her email without further ado. When she called the survey administrator and asked to be taken off the list to which the survey was sent, she was told that it was mandated by "corporate" and everyone was required to participate. When the fourth-quarter results were published, she had to wonder. They read:

Percentage of Good/Satisfactory Ratings	
Production services	99.57%
Electronic mail	99.91%
Test application services	99.56%
Overall	99.68%

This employee couldn't help but believe that others had also found how to get around completing the survey.

Pilot Testing the Items and Surveys

Once you have examined all the items to ensure clear wording and instructions, it is important to pilot test the survey to identify any weaknesses that may have been overlooked. The respondents selected for the pilot test should be representative of the eventual target sample. In some cases, you may select a few people from your target population to participate in the pilot test. If you do so, you will need to consider whether to include them as part of the final sample. One reason for including them in the final sample is that they are members of the target population. However, a reason to

exclude them is that the pilot test may have made them more sensitive to the issues raised in the survey and thus influence their final responses.

Note that if your evaluation is being supported by a contract with a federal government agency, you must follow strict limitations on the number of people in your pilot test. You should also check with your institutional review board concerning pilot testing. Specifically, any question that is asked of more than nine people must go through a clearance process by the Office of Management and Budget (OMB Clearance). (See Martin and Thomas 2006 for a discussion of the OMB clearance process.) Such restrictions do not apply for evaluation work conducted under a federal grant or in other kinds of organizations. Nevertheless, you should keep pilot testing to a reasonable number. We suggest that you use more than one or two people and probably fewer than ten.

You or someone else familiar with the evaluation and its purpose should conduct the pilot test. Since you are the person most familiar with the objectives of the evaluation, you are in the best position to determine during the pilot test whether each question is being understood and the response is providing useful information. One approach to pilot testing involves being physically present while the respondent completes the survey. In such cases, you are able to observe the respondents' reactions to each question and any problems they appear to have in responding to the survey. These observations may lead you to revise the survey. Another approach involves sending the form to respondents and having them complete the form while you are on the telephone and are able to monitor their reactions (possibly using a web cam).

In both of these cases, you should record the amount of time that each respondent takes to complete the survey. Sometimes you may even want to time specific questions. During the pilot testing, the respondent should be asked to comment on the content and wording of the questions. In addition, it might also be helpful to ask respondents to (1) read and explain the question, (2) explain the reasons for his or her choices, and (3) describe other answers that could be given. These probes may reveal incorrect assumptions or alternative rationales that were never anticipated.

In addition to reviewing the specific items, a pilot test also allows you to test the computer system for online surveys. The purpose is simply to make certain that all branching or skip patterns take place appropriately.

(Branching and skip patterns are places where a certain response will eliminate some items or possibly give the respondent a different set of items.) In addition, you can determine whether all of the responses and the correct responses were recorded.

Summary of Steps in Survey Construction

The following list presents a twelve-step process for constructing a survey.

1. Use a variety of sources for possible items, such as available reports, correspondence, and previous surveys.
2. Use potential respondents' language rather your own.
3. Try to avoid using "and/or" in an item. If you use one of these words, you may be asking two questions at the same time.
4. Try to include three to four items to measure the same variable (especially for a test or assessment).
5. Keep the survey as short as possible. A lengthy survey can lead to a high nonresponse rate.
6. Include brief instructions where needed. Try to clarify what respondents are supposed to do.
7. Use consistent wording and formatting as much as possible. For example, you might write, "To what extent does your supervisor do the following: completely, somewhat, not at all" throughout the survey; or "How often does your supervisor do the following: all the time, sometimes, not at all" throughout the survey.
8. Make sure that the format is conducive to your chosen method of data entry, if needed, such as hand tabulation, computer entry, or optical scanning.
9. Conduct a pilot test with a group similar to the potential participants. The purpose of the pilot is to remove or revise confusing and unnecessary items and possibly to test online systems.
10. If feasible, use more items than necessary for the pilot study. You can then eliminate items that do correlate with other items or are confusing to participants.
11. In some cases, you may want to conduct statistical analyses of the pilot data, such as correlations, interitem reliabilities, and factor

analyses. These analyses help to identify items that need to be modified or eliminated. (See Chapter 13 on analyzing evaluation data.)

12 Revise the survey and, if necessary, administer a second pilot test.

Logistics

Survey Administration

Once you have developed the final survey, you must decide how you want to distribute it. You have three basic choices: (1) distribute the surveys in one or more group sessions, (2) send them to individuals through the mail (either regular mail, interoffice, or email), or (3) administer them via the organization's intranet or via the Internet. The following section describes some procedures that can be used.

1. Group Administration. One major advantage of group administration is that it ensures that all surveys are completed and returned. In addition, a group session can help overcome fears and questions about completing the surveys. This method typically requires less of your time for administration and follow-up; the administration is conducted at one time and, in most cases, you have all the participants there and will not have to spend time following up on nonrespondents. The following provides some recommendations for administering a survey to a group in a specially scheduled session. You can adapt these steps for a regularly scheduled meeting:

1 Prepare a list of the survey participants, along with needed contact information.

2 Prepare the surveys for distribution.

3 Schedule the meeting(s) in a separate, quiet room. Depending on the room size and on the number, availability, and location of the participants, you can plan to assemble all the participants at one time, or you can divide the group into smaller groups. Note that at the time of the meeting, the room will need to be equipped with tables, chairs, pencils or pens, surveys, and envelopes for returning the surveys to you or the data collection person.

FIGURE 10.14 Announcement for Group-Administered Survey: Manager/Supervisor

DATE: July 1
TO: Roberta White
FROM: Sam Jones, Training Specialist
RE: Study of Training Effectiveness

Masquerade, Inc. is committed to offering effective training for all its employees. As our president, Lee Smith, has stated, "We want training that truly makes a difference." Therefore, to determine the effectiveness of the Effective Presentations training program, we are undertaking an important evaluation with those who have participated in this program.

One of the employees in your department, Sally Greene, has been selected to participate in this evaluation. Her participation will involve no more than thirty minutes to complete the attached survey, which will be administered to a large group of training participants on *July 26* from *9:30 to 10:00 A.M. in the Operations meeting room.*

We hope that you will communicate to Sally how important her participation is so that we may continually improve and refine our training program's effectiveness. We greatly appreciate your support.

4 Announce the meetings to managers or supervisors of the participants. The announcement should ask for the managers' or supervisors' cooperation. It should state the purpose, date, and time of the meeting(s). (See Figure 10.14 for an example of such an announcement.)
5 Send out announcements of the meeting(s) to the evaluation study participants. The announcements should state the purpose, date, time, and location of the meeting(s). (See Figure 10.15 for a sample announcement.)
6 Administer the survey. On the day of the meeting, arrive at least a half-hour early to check the room facilities. As mentioned previously, the room should have tables and chairs for all participants. At each seat, place a survey, an envelope, and a pencil or pen. After the participants arrive, begin with a greeting and

instructions on how to complete the surveys. In some cases, you may want to reinforce the instructions printed on the survey by reading them aloud to participants.

7 Do not circulate while survey participants are working. Remain quietly seated unless someone raises his or her hand. Then go to that person, answer the question, and return to your seat. In some cases, especially if you are asking the survey participants to rate the quality of your facilitation or instruction, you may want to leave the room.

8 Whether you remain in the room or not, you should instruct participants what to do with the completed survey. You may ask each respondent to put his or her survey in an individual envelope and seal it, or you may tell respondents to place the survey in a specified envelope or box when they leave.

FIGURE 10.15 Announcement of Group-Administered Survey: Participant

DATE: July 2
TO: Sally Greene
FROM: Sam Jones, Training Specialist
RE: Evaluation of Training

Masquerade, Inc. is committed to offering effective and ongoing training to all employees. Therefore, we want to determine the effectiveness of the Effective Presentations training in which you recently participated.

You have been selected to participate in this important evaluation. Your participation will take no more than thirty minutes to complete two survey forms. We will be administering the surveys in the Operations meeting room on July 26 from 9:30 to 10:00 A.M. Please contact *Debbie Dagwood* if you cannot attend or need to reschedule.

You do not need to prepare anything for this session. We will provide all the materials at the time.

We look forward to your participation and your willingness to help Masquerade, Inc. provide its employees with the best training possible.

2. Mail Administration. Some situations require that you mail the surveys to participants. For example, you may want to distribute surveys to individuals who are in many different locations. Or, since scheduling a meeting with the selected people would be difficult, you may decide to mail it.

You will need to weigh the benefits and costs of the mailed, email, or intranet or Internet survey method to make your final decision about its administration. The next list shows steps to follow when you are using a paper-based, mailed method.

1. Prepare a list of the survey participants, along with addresses and contact information.
2. Prepare the surveys for distribution.
3. Prepare return envelopes. Making it easy for participants to return the surveys helps to ensure that they will return the forms. If the surveys will be returned through the U.S. mail, be sure that the self-addressed envelopes have the correct postage. Postage stamps, rather than metering, should be used to give the impression of a more personal approach. Depending on available resources, you may want to consider using certified, special delivery, or overnight mail to make the survey seem more important and consequently increase the response rate. Be sure to include a fax number for returning the surveys, since some participants may prefer this option.
4. Compose a cover letter to accompany each survey. It should state the study's purpose and give the participants instructions on completing and returning the surveys. Statements explaining the importance of completing and returning the survey, including an indication of official sponsorship, how the person was chosen to participate, and how the results will be used, can help to improve the response rate. (See Figure 10.16 for an example.)
5. Prepare envelopes for mailing. Use the list of names with accurate addresses that you created in the first step. Prepare a mailing envelope for each survey participant, with name and address information on the outside of the envelope. Place all the forms

FIGURE 10.16 Cover Letter for Mailed Survey

July 2

Mr. Robert White
All-Round Tires, Mfg.
1425 Palm Avenue
Anytown, Anystate 11111

Dear Mr. White,
Masquerade, Inc. is committed to offering effective and ongoing training to all its employees and vendors. Thus, to make certain that this training truly meets their needs, we are undertaking an important evaluation. The results of this study will be used to make any necessary changes to the Effective Presentations training program in which you recently participated.

Enclosed is a survey that asks specific questions about your experience with and opinions about the training. We would greatly appreciate your taking a few minutes to complete the survey and return it in the enclosed self-addressed, stamped envelope within the next couple of days.

Keep in mind that your responses are strictly confidential. The results will focus on the responses from all those participating rather than on specific individuals.

If you have any questions, please contact *Debbie Dagwood at 999-0000.* Thank you for your time and cooperation.

Sincerely,

Sam Jones
Training Specialist

Enclosures

SJ:cfr

with the self-addressed, stamped envelope and the cover letter into the mailing envelope. Be sure that the name on the cover letter matches the name on the envelope. Double-checking the letters and envelopes is always a good idea. If you are using an identification number on the survey, be sure to check that the correct number has been placed on the survey. Then put the envelopes in the mail (with the correct postage if being sent in the U.S. mail).

6 Create a survey tracking form to record each participant's name and the date the survey was sent and when it has been received. See Figure 10.17 for an example of a survey tracking form. In this example, the evaluator is surveying not only the training participants but also each participant's manager and three of the participant's employees both before and after training.

7 Record the receipt of forms as received. Even if you do not have identifying information on the forms, you can count the forms to determine how many participants have responded. This will be important for reporting the survey's response rate.

3. Email and Web-Based Administration. Some situations require that you use a web-based approach. For example, you may want to distribute surveys to hundreds or thousands of individuals who may be in several different locations. Or you may be undertaking a survey of organizational members but do not have access to individual email accounts.

The following are suggestions for administering email and web-based surveys.

1 For email surveys or web-based surveys, prepare a list of the survey participants, along with needed email addresses.

2 Prepare the surveys or the website.

3 Be sure to include a mail address or a fax number for returning the surveys, since some participants may prefer this option.

4 Compose a cover letter to accompany each survey. The cover letter should state the study's purpose and give the participants instructions on completing and returning the surveys; be sure to include the website location for the survey. Statements as to the importance of completing and returning the survey, including an indication of official sponsorship, how the person was chosen to participate, and how the results will be used, can help to improve the response rate. (See Figure 10.16 for an example.)
5 Double-check the letters and email addresses.
6 Create a survey tracking form to record each participant's name and the date the survey was sent and when it has been received (shown in Figure 10.17). Some online systems provide such a survey tracking form automatically.
7 Record the receipt of forms as received. Again, online systems allow you to view the receipts in real time.

Methods for Increasing the Response Rate of Surveys

Careful wording and formatting of the survey will increase the chances the survey is completed and returned. However, additional procedures described previously for group administration and mail survey administration will help to increase the response rate. The following are some additional suggestions for encouraging potential participants to respond.

Importance of the survey. The survey or the survey's cover letter should emphasize that the future direction of the program being evaluated depends on each individual's response and that each response is really needed. Furthermore, without each respondent's help, the organization will not have the best information for making important decisions.

Keep it short. Ask only questions that are needed for the evaluation and base these on the key evaluation questions. This is the time to winnow out the "nice to know" from the "need to know." A shorter survey will also likely result in more people willing to complete it.

FIGURE 10.17 Survey Tracking Form

	Pretraining Surveys										Posttraining Surveys									
	Date Sent					Date Received					Date Sent					Date Received				
Participant's name	Self	Mgr	Emp1	Emp2	Emp3	Self	Mgr	Emp1	Emp2	Emp3	Self	Mgr	Emp1	Emp2	Emp3	Self	Mgr	Emp1	Emp2	Emp3

Additional "interesting" questions, especially at the beginning, can help an otherwise uninteresting survey. This is particularly the case when you have a survey that is longer than one page. In such cases, adding a couple of questions that lead to a higher "interest level" more than compensates for the additional length.

Handwriting (with paper-based surveys). Handwritten signatures, names, addresses, or postscripts urging a prompt reply can partially redeem an otherwise impersonal survey.

Appearance of the survey. Items and choices should not be crowded together, even if such spacing results in more pages for the survey.

Incentives. A variety of incentives have been shown to be effective in increasing the response rate to mailed surveys. Depending on the group being surveyed, incentives can include dollar bills, coupons for food or other items, restaurant certificates, a promise of the results, a donation to a favorite charity, candy, cookbooks, personal care items, raffle tickets, movie tickets, child care, a meal, and phone cards. You must decide on the importance of stimulating responses through an incentive as well as on the appropriateness of the incentive.

Deadlines. Be careful with the use of deadlines as a motivation to respond. A deadline implies that the responses cannot be used after a certain fixed date. Rather than indicating a fixed date, you should recommend that the respondent try to complete the survey within a day or two or within a week or two, depending on the urgency of the survey data. Also, describing the nonresponse follow-up procedures as well as the importance of the response may motivate respondents to return the survey promptly.

Follow-up procedures. Systematic follow-up procedures can help improve the response rate to mailed surveys. (1) One week prior to mailing the survey, send a postcard or letter or email to the respondents alerting them to the upcoming survey and indicating its importance. (2) One week after mailing the survey, send a postcard, memo, or email reminder. Or you may insert an article in the organization's newsletter describing the evaluation and the forthcoming survey. (3) Three weeks after mailing the survey, send a letter or email, along with another copy of the survey or a link to the survey website. (4) Three weeks after the second survey mailing, call those who have not responded, and encourage them to

complete the survey. (See Dillman 1978, 2006; Sue and Ritter 2007 on follow-up procedures.)

Handling Nonresponse Bias

In spite of our most valiant efforts to increase the number of responses, it is rare to obtain a 90 percent to 100 percent response rate. Some numbers of survey recipients do not respond because of fear, disinterest, or preoccupation with tasks that they consider a higher priority. Others do not respond because they never receive the survey (possible mail, email, or Internet problems) or they are unable to complete the survey (because of illness or a language barrier, for example). As an evaluator, you should make advance plans for how you will deal with nonrespondents.

One option is to do nothing. In this case, you plan to analyze the data from the respondents and draw conclusions based on those responses. This is a reasonable option if there are only a few nonrespondents. Remember, however, that if only 20 percent of the recipients return the survey, you have no way of knowing whether the other 80 percent would have responded similarly to those who did respond.

Another option is to do a nonrespondent check. Using previously gathered information about the sample participants (such as demographic information on department, location, and position), you compare the respondent group with the nonrespondent group using appropriate statistical tests. If there are no significant differences between the groups, you might assume that the nonrespondents (had they responded) would have responded in a manner similar to the respondents.

Another option is to un.dertake a nonrespondent follow-up. In this case, you follow up with a random sample of nonrespondents, typically by phone or in person, asking them a few of the critical survey questions. Such a follow-up provides the data needed to determine whether the nonrespondents do, in fact, respond in the same way as the original pool of respondents. Furthermore, you have the data needed to make statistical adjustments to your results if you find that the nonrespondents answer differently from the respondents.

Managing the Data Collection Process

Keeping track of the survey responses comprises a major task for any data collection effort, but it is particularly important when you are undertaking an evaluation using a survey with many participants. Only by keeping track of the respondents will you be able to know whether, when, and with whom you will need to follow up. In addition, if you are undertaking a pretraining and posttraining survey, for example, you will want to make sure that participants complete surveys before and after training. Otherwise, specific kinds of comparisons will be impossible to carry out. (See Chapter 13 on data analysis.)

One approach to keeping track of the survey responses is to use a survey tracking form as described earlier and presented in Figure 10.17. At the same time you keep track of the survey responses, another task is to make an immediate check on any problem questions. You can do this by examining each survey when it is returned for indications that respondents were confused or unable to respond. If you find such problems in the surveys, you will need to decide whether you should undertake some follow-up questioning of respondents to clarify the problems or whether to use the respondents' data at all.

Another task is to make final plans for handling nonrespondents. Although the tracking can help to identify the individuals with whom you will need to follow up, it can also help determine if there are characteristics that are common to the nonrespondents. For example, many of the nonrespondents may come from the same location. This nonresponse may result from some situation in that location (e.g., a strike or layoff at that facility or a downed server) or from lost mail. Alternatively, if the nonrespondents did come from the same location, you may want to find out whether there are some organizational issues affecting the respondents' lack of participation. If there are some common characteristics, you may be able to determine an appropriate kind of intervention to encourage responses.

Keep in Mind . . .

- Surveys are an effective method for collecting data, but you should avoid overusing them.

- Surveys are deceptively simple-looking; allocate sufficient time and resources for developing and pilot testing them.
- Consider using various kinds of questions, such as open-ended, fill-in-the-blank, two-choice, multiple-choice, rating scales, and ranking.
- Only ask the "need-to-know" questions; limit the number of "nice to-know" questions.
- Consider using online and web-based surveys when appropriate to reduce data collection and data entry time and costs.