

10

Making Research Decisions: Survey Research

Chapter Contents

- Mail Surveys
 - Telephone Surveys
 - Online Electronic Surveys
 - Personal Interviews
 - Final Thoughts
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When researchers conduct a survey they collect information directly from members of a population. It usually involves interviews and questionnaires that participants fill out alone or with the assistance of an interviewer. Practitioners' use of this method of research has grown dramatically over the past several years and today is a regular part of many organizations' communication programs. Survey research is an indispensable part of organizations' attempts to monitor their internal and external environments; solve complex problems; understand the opinions, attitudes, and behaviors of key target audience members; track public opinion; engage in sophisticated campaign planning and evaluation; and, in some cases, seek media attention for an organization or client.

What is responsible for the rapid increase in the use of survey research? Organizations have increasingly felt the need to understand the opinions, attitudes, and behavioral motivations of their key target audience members, including legislators and government regulators, community members, consumers, employees, and other important groups. The environments in which organizations operate are more competitive; target

audiences are more sophisticated and, in some cases, given to greater activism. Single-issue activist groups, employees, and others are more likely to use the media to engage organizations in public debates using publicity and promotion techniques to gain the attention and support of the media, community watchdog groups, government regulators, and other key target audiences.

Practitioners want to ensure a high level of performance for their programs and campaigns, particularly as the costs of a campaign or program increase or as organizational certainty about a campaign or program decreases. In this case, survey research serves as a kind of insurance, providing critical information to practitioners as they plan and implement public relations programs and campaigns. Valid, reliable information replaces practitioners' reliance on past practices, hunches, industry standards, or rules of thumb. In these circumstances, survey research is an invaluable part of program planning and problem solving.

Finally, organizational management wants to know how practitioners are using resources and the return on investment they provide to an organization. Traditionally, practitioners have relied on favorable media coverage, key story placement, media clip counts, and similar methods to communicate the value of their publicity and promotions work to organizational management and clients (Pinkleton et al., 1999). Clients and managers initially are impressed when practitioners bring in large clip-filled binders and low cost-per-impression numbers. They grow skeptical, however, when they begin to ask larger, more important questions about the effect of public relations activities on the attitudes and behaviors of key target audience members ("PR Needs," 1993; "PR Pulse," 1994; Robinson, 1969). In this instance, survey research provides a more sophisticated means of tracking changes in the opinions, attitudes, and behaviors of target audience members, and it is an indispensable tool for practitioners communicating the benefits of public relations activities to organizations and clients.

These are among the most critical issues practitioners face and are a large part of the reason practitioners' use of survey research has increased so rapidly over the past several years. As noted in chapter 9, surveys generally are descriptive or analytical in nature. Descriptive surveys characterize conditions and circumstances as they exist in a population, and analytical surveys attempt to explain why current conditions exist. In fact, many surveys serve both purposes, and this often meets practitioners' and organizations' needs for information. Surveys generally possess several advantages over other research methods in the collection, analysis, and interpretation of information.

Researchers primarily conduct surveys via mail, telephone, personal interviews, and the Internet via the world wide web. They can use each method in a relatively straightforward approach or adapt a method to reach

new audiences or to meet the demands of a particular research situation. In a typical survey, researchers initially set objectives for a study. Next, they design the study. When researchers design a study, they normally select a population and establish sampling procedures, select a survey method, and design and pretest a questionnaire. Next, members of a research team typically collect, edit, and code data. Finally, researchers analyze and interpret the results.

Because chapter 9 presents the research planning process, this chapter focuses on some of the key advantages and disadvantages of each survey method. This discussion raises an important issue. Clients and organizations, often looking to make quick decisions, frequently want to identify the single best survey research method. In reality, there is no best method of survey research, and it is a risky oversimplification to sort methods based on a scale of strengths and weaknesses (Frey, 1989). The method that is best for a project depends on various factors. Beyond the informational requirements of a project, researchers must consider the population and sample, the survey topic or topics, and the importance of reliability and validity. In addition, a project's budget and time frame often have a disproportionately large effect on survey-method selection (Pinkleton et al., 1999). As Dillman (1978) pointed out, researchers cannot answer the question of which research method is best without context. The potential advantages and disadvantages of each method do not apply equally, or even at all, to every survey situation. Choosing the most appropriate research method is critical, and for this reason, practitioners must consider their use of a survey method in relation to the needs and constraints of each situation.

With this in mind, it is beneficial for practitioners to understand each survey research method. The flexibility and adaptability of different survey methods inevitably leads to conflicting suggestions from researchers or others concerning an appropriate research method for a project. Practitioners serve their own interest by understanding at least some of the key issues associated with the use of one survey method over another, as well as other critical aspects of survey implementation such as issues associated with the use of probability versus nonprobability sampling. This understanding allows them to make an informed decision and makes them sophisticated consumers of the research products they purchase. The remainder of this chapter presents each of the primary survey research methods broadly and includes information about the potential benefits and limitations of these methods.

MAIL SURVEYS

Traditional mail surveys are conducted by sending a questionnaire via regular mail to a sample of individuals. Participants fill out questionnaires and mail the surveys back to the researcher. A project manager typically

sends a cover letter with the questionnaire to explain the purpose of the survey and encourage sample members to respond. Researchers typically include stamped, addressed reply envelopes to encourage respondents to complete the surveys and mail them back to researchers. Researchers often use mail surveys because of their low cost and ease of administration. If a mailing list is available (and it often is), it is relatively easy to use it as the source of a probability-based sample. Several challenges face researchers using mail survey research including the length of time it takes to complete a project and the relatively low response rates of mail surveys. Despite these concerns, the low cost and ease of administration of mail surveys are among the advantages that make them an attractive choice to researchers.

Mail Survey Considerations

There are many nuances that contribute to successful survey research, and this is especially true of mail surveys (Table 10.1). A mail survey is a self-administered questionnaire. This requires that the cover letter and questionnaire be carefully constructed and written to optimize the participation rate of sample members. Unfortunately, no matter how well a questionnaire and cover letter are written, this is not enough to ensure the success of a mail survey (Dillman, 1978). The result is that mail surveys often suffer from low rates of response despite researchers' best efforts to encourage participation. Although there are many keys to a successful mail survey project, practitioners must pay special attention to the cover letter and questionnaire, sampling method, and response rate to ensure the success of mail surveys (chapters 6, 11, and 12 contain more information about these important topics).

A well-written cover letter is critical to the success of a survey because it must introduce a survey to potential respondents who are busy and uninterested and motivate them to fill out the survey and return it immediately.

TABLE 10.1
Characteristics of Mail Surveys

<i>Selected Benefits</i>	<i>Selected Limitations</i>
Inexpensive (lowest cost per respondent)	Frequently suffer from low response rates (often requires inducements and multiple mailings)
Reaches widely dispersed sample members easily	Data collection may take a long time
Mailing lists make it easy to generate probability-based sample	No questionnaire flexibility; short, self-explanatory questionnaire needed
May provide high degree of anonymity (useful for sensitive topics)	Survey respondent may not be selected sample member
No interviewer bias	Members of certain groups less likely to complete questionnaire

Beyond sending a prenotification card or letter to a potential participant, a cover letter usually is the only opportunity a researcher has to pique the interest of sample members, establish a minimal level of rapport, and anticipate and answer key questions. The difficulty of writing a good cover letter is increased because a long, dense letter that satisfactorily answers everyone's questions typically will discourage careful reading, or worse, it will cause potential respondents to throw the questionnaire away. The first two paragraphs of a cover letter usually explain who is sponsoring the study and what the study is about, and it is written to convince the reader that the study is useful. Later paragraphs are used to convince readers that their response is critical and to assure them of confidentiality. Researchers must accomplish all of this without biasing participants' responses (Czaja & Blair, 1996). Writing an effective cover letter can be difficult and perplexing. Given the importance of the cover letter to the success of a mail survey, researchers need to draft and pretest different letters to help ensure they have written a letter that reflects a tone of mutual respect (Dillman, 2000).

Mail surveys also require researchers to use carefully written and pretested questionnaires. Mail questionnaires require very careful writing and construction because they are self-administered and must be completely self-explanatory. Researchers must strive to produce an attractive questionnaire of reasonable length with plenty of white space and clear, simple instructions. The absence of an interviewer means there are no opportunities for interviewers to encourage survey response, help participants understand poorly written questions or instructions, or answer even basic participant questions (Dillman, 2000). Although researchers can provide a telephone number or e-mail address for such purposes, participants rarely use them. In fact, participants should not need to contact researchers in order to understand questions and instructions. Instead, the instructions and questions that researchers use in mail surveys must be written so that they are uniformly understood by as many potential respondents as possible (Czaja & Blair, 1996). Poorly written questions decrease the reliability and validity of survey results, and sample members who do not understand questions or instructions are unlikely to participate, resulting in low response rates.

Pretesting a questionnaire is essential to ensure that readers understand survey instructions, questions, and response categories. When project managers pretest a questionnaire, individuals who are similar to sample members in terms of key sample characteristics—such as age, education level, experience, or other relevant qualities—actually complete the survey, making note of confusing or unclear questions and instructions. Researchers also note and discuss other aspects of questionnaire administration with pretest participants such as the length of time they needed to complete the survey and various features they liked or did not like about the

questionnaire. There are many ways to pretest a questionnaire, and no single method is singularly advantageous. It is important, however, that researchers pretest all written material that potential respondents will receive, preferably several times. Experience shows that problems can sneak into even comprehensively tested questionnaires. Researchers correct most survey problems, however, through multiple pretests.

Even well-written and pretested mail surveys often suffer from low response rates, typically among the lowest response rates of the primary survey research methods. Although there are a variety of different formulas for determining survey response rates, the response rate generally is the percentage of sample members who actually participate in the survey (see chapter 12). A low response rate raises concerns of *nonresponse bias*. Nonresponse bias contributes to error in survey results because of differences between those who participate in a survey and those who do not (Adler & Clark, 1999). Simply put, when enough sample members choose not to participate in a survey, their lack of participation ruins the external validity, or generalizability, of a study's results.

Surveys that are well designed help increase participants' rate of response. Although each project is different, there are several elements to a successful project and a number of ways researchers work to increase mail survey response rates. Dillman (1978; 2000) noted that integration and consistency among the individual elements of a mail survey are keys to increasing mail survey participation. These most commonly include the use of prenotification and reminder cards or letters, as well as sending new cover letters and additional copies of the questionnaire to nonrespondents. Initially, a prenotification card or letter can be an effective way for research project managers to prepare respondents for survey participation. Typically, sample members receive this mailing 1 or 2 weeks before the questionnaire and cover letter are sent, and researchers use it to create understanding and even a small degree of anticipation among sample respondents. Researchers mail the cover letter and questionnaire next. The cover letter and questionnaire typically are followed by a reminder card or letter, or even better, a new letter and questionnaire, 2 or 3 weeks later. Researchers typically repeat this process more than once to offer potential respondents as many opportunities as is reasonably possible to participate in the survey.

Research suggests that follow-up mailings are an effective way to increase mail survey participation. In general, as sample members delay responding to a survey the likelihood that they will participate lowers. Properly timed follow-up mailings provide additional encouragement to respond. Researchers can use other techniques to help increase mail survey response rates as well, including sponsorship by a university or other respected institution; mailing questionnaires in envelopes with stamps rather

than metered or bulk rate markings; enclosing a stamped, self-addressed return envelope with the survey; and using relatively modest monetary incentives such as a \$2 bill or other small inducements.

There are other ways researchers attempt to increase response rates, but some attempts to produce increased participation may actually reduce participation. Using personalized envelopes or questionnaires—for example, when respondent anonymity is important or the topic of a survey is sensitive—is ineffective. It is critical for researchers to understand as much as possible about the topic and sample members and to pretest all aspects of a survey in order to increase their ability to obtain valid, reliable results from sample members.

The representativeness of mail survey results is increased through probability sampling methods, as discussed in chapter 6. One benefit of mail surveys is that practitioners can purchase the names and addresses of randomly selected members of a population from vendors who sell samples, often at a reasonable price. These same companies typically can provide highly specialized samples at a somewhat higher price. Such samples often are invaluable because they allow research team members to complete a survey using a probability-based sample, helping to increase the reliability and external validity of survey results. Some organizations and associations use their own mailing lists as the basis for a probability sample. The mailing list serves as the *sampling frame* (a list of population members from which researchers draw a sample), and researchers can randomly draw names and addresses from the list to form the sample. In this way, it is a relatively simple process for researchers to generate a probability-based sample to use when conducting a mail survey.

Practitioners should take care in the interpretation of research results, however, when mailing lists serve as the basis for a sample. Even though the sample is probability based, practitioners can legitimately generalize the results only to members of the mailing list. Ideally, a mailing list contains all of the members of a population. In this case, the results of the survey are likely to accurately reflect the true opinions and attitudes of all population members (given a certain range of error at a specific level of confidence; see chapter 6 for these calculations). In other instances, however, a mailing list is not a complete list of all members of a population. This might be the case, for example, if researchers are trying to survey members of a professional association using the association's mailing list. Any sample generated using such a mailing list would produce results that are directly generalizable only to members of the association and not to all members of the profession. This matter may seem small and technical, but it is important. Study results are as trustworthy as the sample on which they are based. Researchers must use mailing lists with care and consider the ramifications of sampling decisions before plunging into data

collection. Practitioners cannot increase the generalizability of a survey's results once a study is complete.

Mail Survey Critique

Mail surveys are among the least expensive survey research methods. This benefit alone contributes greatly to their popularity. Although there are situations in which other survey methods may cost less, in most instances, mail surveys provide the ability to cover a large geographical area at a low cost per respondent (Dillman, 1978). For many surveys, there generally are similar costs associated with developing and producing a questionnaire, securing a sample, and analyzing and interpreting the results. Two methodological benefits significantly reduce the cost of mail surveys relative to other research methods. The first is postage; researchers can contact sample members for the same low cost whether they live across town or across the country. Although telephone surveys also can be inexpensive, mail surveys often enjoy a cost savings because of mail distribution. The second cost-savings benefit results from lower administrative costs. Project managers do not need interviewers to collect data; therefore, these surveys generally require fewer people to complete the data-collection process. Although it is important that a knowledgeable staff member assemble materials, track responses, mail follow-ups, and edit and code returned questionnaires, mail surveys almost always require fewer administrative resources than other survey methods.

Research managers also use mail surveys to reach widely dispersed sample members. Although researchers can use other methods to reach dispersed sample members—often at increased costs—mail surveys easily address this issue. In addition, mail surveys allow for selective probability sampling through specialized mailing lists. Although researchers must be concerned about the limited generalizability of survey results when they use lists as a sampling frame, mailing lists can make excellent sampling frames in appropriate research settings. Researchers may use a selected list, for example, when they need to sample a highly specialized, professional population. Researchers also can use mail surveys to collect information from sample members such as this because they are busy and are unlikely to participate in a telephone or personal interview.

Researchers may choose mail surveys when they desire a high degree of respondent anonymity (Mangione, 1995). Respondents may be more likely to provide candid answers to questions concerning sensitive subjects because they are not speaking directly to an interviewer. Research indicates, for example, that respondents can more easily answer questions about highly personal issues such as drunk driving convictions or personal bankruptcy using self-administered questionnaires (Aday, 1989; Locander, Sudman, & Bradburn, 1976). In addition, researchers generally

are less concerned about the introduction of interviewer bias into study results when they use mail surveys. Respondents typically are sensitive to both verbal and nonverbal cues during the interview process, and sometimes they interpret these cues as supportive or unsupportive of their opinions, attitudes, and behaviors. Respondents may change their answers as a result. Survey results concerning racial prejudice, for example, would be ruined if participants changed their answer because they sensed interviewer disapproval for their prejudicial opinions and attitudes. Instead of an accurate measure of racial prejudice, study results would be skewed by participants who provide socially desirable responses because of perceived interviewer influence. Researchers who are studying sensitive subjects or who have concerns regarding the potential for interviewer bias can use mail surveys to help eliminate such problems.

Perhaps the greatest concern practitioners have when they use mail surveys is their low rate of response. It is not uncommon for mail surveys to have response rates ranging from 5% to 40% (Wimmer & Dominick, 2006). Although it is possible to achieve higher response rates (Dillman, 2000), a low return rate casts doubt on the validity and reliability of a survey's findings by introducing nonresponse bias. Mail surveys with enough follow-up to obtain a high response rate typically require at least 8 weeks to conduct regardless of a sample's size or its geographic location (Czaja & Blair, 1996; Schutt, 1996). In many instances, 8 weeks is too long to wait given the time constraints that typically accompany research projects, particularly when researchers typically can conduct telephone surveys in less than half that time. In addition, the need for incentives and multiple mailings increases survey costs.

Another significant problem with mail surveys concerns the need for questionnaires to be self-explanatory and relatively short to encourage survey participation. Because no one is available to explain questions or provide additional information, researchers must make survey instructions, question wording, and question skip patterns—necessary when certain questions apply to some but not all participants—extremely simple and clear. Even when questions and instructions are clear, some respondents skip questions or even entire sections of a questionnaire for any number of reasons. Additionally, researchers can never be sure who has actually filled out a survey. Despite the fact that research project managers usually direct surveys to specific individuals, these selected sample members may ask other individuals who are not a part of the sample to fill out questionnaires. Finally, project managers are less likely to receive returned surveys from respondents who are low in educational attainment, who do not like to read or write, and who are not interested in the survey subject (Czaja & Blair, 1996; Wimmer & Dominick, 2006). Any of these concerns, working individually or together, may introduce bias that threatens the accuracy, reliability, and validity of study results.

TELEPHONE SURVEYS

Telephone surveys involve contacting respondents and conducting personal interviews by telephone. This method of data collection represents a middle ground between mail surveys and personal interviews in that telephone surveys offer many of the advantages of personal interviews at a cost that often is competitive with that of mail surveys (Wimmer & Dominick, 2006). Although they do not offer the high degree of flexibility present in personal interviews, telephone surveys offer researchers more control and, until recently, consistently higher response rates than many mail surveys. Research team members also can complete telephone survey data collection in less than half the time it takes to complete a mail survey. In many research situations, telephone surveys can provide substantially the same information as a face-to-face interview at about half the cost (Groves, 1989). These benefits have contributed to a rapid increase in the researchers' use of telephone survey research, although technology now is eroding the viability of this survey method by reducing participation.

Telephone Survey Considerations

Telephone surveys (Table 10.2) require interviewers to introduce the survey to sample members or perhaps reintroduce the survey if research managers have mailed prenotification cards or letters. Interviewers also must obtain cooperation, present instructions, ask questions, provide answer categories, and motivate participants to answer questions. They must do this while they answer any questions participants have and effectively administer the survey and record answers (Saris, 1991). Throughout this process, an interviewer ideally operates as a neutral vehicle through which

TABLE 10.2
Characteristics of Telephone Surveys

<i>Selected Benefits</i>	<i>Selected Limitations</i>
Relatively inexpensive (reasonable cost per respondent)	Interviewer bias may occur
Data collection can be completed quickly	Not every household has a telephone (potential source of bias)
Reaches widely dispersed sample members relatively easily	Product and service innovations make it difficult to reach sample members
Lists or random digit dialing make it easy to generate probability-based sample	Short, largely self-explanatory questionnaire required
Response rates relatively high (but falling)	Limited interview flexibility
Rapport established with respondent can help gain compliance	Respondents may not answer thoughtfully

a respondent's answers are communicated to researchers (Wimmer & Dominick, 2006). It is a complex process that requires carefully trained interviewers. Telephone surveys require well-written questionnaires and instructions because they rely solely on verbal communication. Because of this, survey design and construction are based on utility rather than on aesthetics. The interviewers' job is more difficult and the quality of the data collected is reduced if instructions, questions, and response categories are unclear.

Problems are also likely if question order does not proceed in an obvious manner with the aid of transitional statements, if question placement is irregular or lacking apparent topical organization, or if the survey lacks easily understood instructions (Frey, 1989). Interview questions and survey design issues often revolve around the needs of an interviewer to attract and keep a potential respondent's attention. Questionnaires typically flow from introductory questions designed to maximize respondent interest to issue-oriented questions that provide critical information about respondents' opinions, attitudes, and behavioral motivations, and then to routine demographic questions. Project managers use open-ended questions, which require interviewers to record a respondent's answer verbatim, sparingly because these questions take time, interrupt questionnaire flow, and require additional coding during data analysis. Given the importance of a well-designed survey instrument, questionnaire pretesting and comprehensive interviewer training are a pivotal part of telephone survey success.

Although each survey is different and typically requires specialized interviewer training, there are common threads to successful training of telephone interviewers. First, project managers want interviewers to pay particular attention to the survey introduction because this is the first point of caller contact. Second, interviewers need to learn to read questions exactly as they are written or appear on a computer screen; practice answering respondents' questions; practice selecting survey participants after they have made initial phone contact, if necessary; and learn how to encourage respondents to use appropriate response categories as necessary. They must accomplish all of this while providing neutral feedback and probes so that they will not influence participants' responses. Interviewers also must prepare for survey questions that, although necessary, are unusual or potentially bothersome to respondents, such as questions concerning their age or income. Finally, interviewers must complete a call record. This is a record of the result of each call attempt, and it provides project managers with information they need to determine sample members who receive additional call attempts and to determine the response rate for a survey. The number and complexity of these and other issues necessitate thorough interviewer training before ever calling sample members (we provide tips for training interviewers in chapter 12). Also, this training enables interviewers

to provide participants with a pleasant interview experience and helps encourage higher rates of response.

Precontact in the form of letters or cards effectively increases response rates in a manner similar to mail survey research. Prenotification letters or cards also can help legitimize a study by providing information about why researchers are contacting sample members, the kind of information interviewers will request, and the benefits of participation to sample members. Providing general information concerning the timing of survey phone calls helps to reduce the surprise associated with receiving an unanticipated phone call from an unknown source. Depending on the sample, many interviewers place initial calls on weeknight evenings (excluding Friday) from 6:00 p.m. to 9:00 p.m. Interviewers make callback attempts when they are unable to reach sample members during an initial call attempt. Although the number of callbacks differs according to survey characteristics, Wimmer and Dominick (2006) reported that three callbacks produce contact about 75% of the time, with six callbacks achieving contact about 95% of the time.

As with all research methods, the external validity, or generalizability, of telephone survey results depends on researchers' use of probability-based sampling methods, which are explained in chapter 6. One benefit of telephone survey research is that, similar to mail surveys, research managers can purchase names and phone numbers of randomly selected members of a population from commercial sample vendors at a reasonable price, allowing them to use probability-based sample relatively easily. These same companies typically can provide specialized samples at a higher price.

When researchers choose not to purchase a sample, they often can use either print or electronic telephone directories, typically available for free or at a low cost, as the basis for sampling. Of course, no telephone directory is entirely representative of a population because some households have unlisted telephone numbers. In some communities, the proportion of households with unlisted telephone numbers exceeds 50% (Survey Sampling, Inc., 1994), leaving a large portion of the population unavailable for sampling from a telephone directory, particularly in urban areas (Frey, 1989; Lavrakas, 1993). Researchers typically use a random-digit dialing (RDD) technique to overcome problems with unlisted telephone numbers and produce a probability-based sample. The importance of randomization is explained in chapter 6.

Theoretically, RDD provides an equal probability of reaching a household with a telephone access line regardless of whether its telephone number is listed or unlisted, and it replicates what would occur if a complete sampling frame existed (Lavrakas, 1993). There are several RDD techniques including some that are computer based. Most RDD techniques rely on standard area codes and telephone number prefixes that correspond geographically to a desired population, and they use a randomization

technique to produce a telephone number suffix (the last four digits of a phone number).

In some of the more common but cumbersome RDD techniques, research staff members draw telephone numbers out of an appropriate telephone directory by hand and randomly change the last four digits to create a new number. They may add a number between 1 and 9, for example, to the last digit of a phone number. The added digit can be a constant or can be assigned randomly to each new number. In the plus-one method, research staff add 1 to the last digit of a telephone number suffix to produce a new telephone number. So, if staff members draw the telephone number 123-4567, they dial 123-4568. In a common variation of this technique, researchers use a table of random numbers (typically found in the back of statistics textbooks) to generate numbers used to replace one or more telephone number suffix digits (Frey, 1989; Lavrakas, 1993). Although such techniques produce unusable telephone numbers such as businesses or government offices, which adds to survey costs, they also produce a probability-based sample that provides coverage of unlisted telephone numbers, excluding cell phone numbers.

Once interviewers make initial telephone contact, some studies require randomization of household members within each household. If the household itself is the unit of analysis, any adult member can provide the information needed and within-household selection procedures are not necessary. When researchers seek results that are generalizable to an entire population of adults rather than households, however, interviewers must use a systematic process for selecting the member of the household to interview. If staff members do not use selection procedures, the resulting sample may include disproportionately high numbers of women and older adults, who are most likely to be home when interviewers call (Lavrakas, 1993; Salmon & Nichols, 1983).

Scholars and research practitioners have developed various selection procedures to avoid possible bias resulting from interviewing the person who answers the telephone. Unfortunately, they can be complex and unwieldy to use (Kish, 1965). When interviewers use selection procedures, they typically increase survey costs because of the extra time required to identify and select respondents and the need to make additional callbacks when selected respondents are unavailable. In addition, interviewers may experience additional refusals because interviewees are confused or frustrated by the procedures they must follow before an interview begins. One method that has gained widespread acceptance for randomizing respondent selection is to ask for the eligible person in the household whose birthday was most recent or who will have the next birthday (Salmon & Nichols, 1983). Although some researchers have expressed concerns that these methods do not always produce a completely randomized sample, the birthday-selection method has been widely embraced by both scholars

and research practitioners because it is generally effective, easy to use, not time consuming, and not intrusive (Lavrakas, 1993).

Finally, computer-assisted telephone interviewing (CATI) now is common among universities and commercial research firms. When research projects rely on CATI systems, interviewers use computers to facilitate nearly every aspect of the interview process. The computer dials the telephone number and the interviewer reads the introduction, respondent-selection procedures, and questionnaire off the screen. Interviewers use the computer to record and code responses and to help with statistical analysis. A CATI system is particularly useful if a questionnaire has complicated skip patterns or if researchers desire randomization of questions within a survey. The development of computer technology in connection with data collection is growing rapidly, and when a research organization properly implements a CATI system, it has the ability to improve the quality of telephone survey research.

Telephone Survey Critique

The benefits of telephone survey research have contributed to an increase in the popularity of this type of data collection. In particular, telephone surveys are relatively cost effective. Although they generally are more expensive than mail surveys, they often are less expensive than personal interview surveys. In addition, the short time in which researchers can complete a telephone survey is highly advantageous to practitioners. Given the importance of cost and time factors in many research project decisions (Pinkleton et al., 1999), these factors make telephone surveys the frequent choice of research professionals and public relations practitioners.

In addition, telephone survey data-collection methods have improved over the past several years to the point that telephone survey research compares favorably with other methods of data collection in terms of data quality. Research staff can collect data from a widely dispersed sample. If a list suitable as a sampling frame is available, research staff can draw a probability-based sample. If a suitable list is not available, staff members often can use RDD to produce a probability-based sample. Either way, researchers use telephone surveys to produce survey data with a high degree of reliability and external validity.

Telephone surveys also have had strong response rates in the past, generally much higher than typical mail survey response rates, although participation has been falling. Not long ago, telephone survey response rates commonly ranged from 60% to 90% (Czaja & Blair, 1996), and Wimmer and Dominick (2006) have suggested that telephone survey participation still is relatively high once interviewers contact qualified participants. Unfortunately, basic technology such as answering machines, voicemail, and caller identification, and now cell phones and elaborate call screening

technologies, are making it more and more difficult for interviewers to make initial contact with sample members. Even after interviewers make initial contact, sample members may suspect they are the target of a sales attempt or simply resent an interruption and terminate an interview before it is completed. In general, cooperation rates for large national media surveys conducted over several days have fallen to around 38% but may dip into the teens for overnight surveys (Morin, 2004). As participation drops, this raises questions about the external validity, reliability, and accuracy of telephone survey research.

What does all of this mean for the future of telephone survey research? No one knows for certain, but so far, telephone interviews still are viable as a research method. The results of a face-to-face survey of 2,000 randomly selected adults, for example, indicated that in 2004 only 2.5% did not have a traditional home phone and instead relied only on their cell phone (Morin, 2004), although this number may be higher among young adults. More important, recent research concerning differences among participants and nonparticipants in surveys indicate that, so far, increasing rates of nonparticipation do not appear to strongly impact the quality or accuracy of survey research data (Grosse & Ridout, 2004; Keeter, Miller, Kohut, Groves, & Presser, 2000; Morin, 2004). Although this situation may change, indications are that nonparticipation currently is not hurting survey research.

Despite these challenges, it still is important for project managers to do all they can to encourage as much participation as possible. Telephone surveys are likely to enjoy stronger respondent participation when research staff members write and pretest survey introductions and questionnaires carefully, send prenotification cards or letters, and use callbacks as needed, and when the project is sponsored by a university or respected institution. Some organizations that conduct telephone surveys even offer respondents small monetary incentives for participating in surveys.

Well-trained and experienced interviewers are indispensable in helping to secure participation and help increase the quality of data studies produce. By providing answers to participants' questions, negotiating complex questions, and helping the data-collection process move forward in an orderly fashion, interviewers contribute significantly to the accuracy and reliability of study outcomes. In addition, interviewers may be able to establish rapport with respondents that helps them to obtain complete and accurate information, and sometimes this convinces respondents to complete an interview. At the same time, the use of interviewers raises concerns about the potential for introducing bias into survey results. Interviewers should have no influence on respondents' answers, but instead serve simply as a means of data collection. Interviewers require thorough training to learn how to provide neutral feedback and answer respondents' questions in a nonbiasing manner. In addition, interviewers need to have

a high level of experience when project managers are concerned about the potential for bias.

Finally, telephone interviews are limited in some respects. Perhaps most obvious is that researchers' use of visuals and similar interview aids is severely hampered. In addition, project managers' instructions, questions, and response categories must be easy for sample members to understand because interviewers are reading them over the telephone. Participants must be able to remember the question and the appropriate response categories, and they typically have no time to examine personal records or other information before responding to a question. Open-ended questions are difficult for researchers to use in a telephone survey because they require the interviewer to record a response verbatim—made easier by the digital recording capabilities of CATI software—and commonly result in short answers that are difficult to interpret. In addition, researchers have no control over the survey environment. Incoming calls, the doorbell, children, or a loud television commercial commonly interrupt an interview, especially when respondents are making little attempt to understand and participate in a study. These interruptions and distractions sometimes require interviewers to schedule a callback that may result in an incomplete interview.

Project managers also must keep interviews relatively short. Most respondents are unwilling to spend a great amount of time on the phone answering questions. Although 30 minutes or less is an acceptable interview length, many market researchers try to keep an average interview under 10 minutes. It can be difficult or impossible to collect a large amount of high-quality data in such a short interview. Despite these difficulties, telephone surveys are proven research method frequently used by scholars, pollsters, and public relations practitioners.

ONLINE ELECTRONIC SURVEYS

The Internet, e-mail, and the world wide web have dramatically impacted survey research as a field, and the number of surveys administered electronically continues to grow (Shannon, Johnson, Searcy, & Auburn, 2002). Today, most studies of this type range from relatively simple questionnaires contained in, or attached to, e-mail messages, to sophisticated web-based survey systems. Unlike traditional mail and telephone surveys, researchers still are determining the best principles to use when constructing and implementing surveys, although preliminary research indicates that many of the same principles that apply to telephone and especially mail surveys also apply to online surveys (Shannon, Johnson, Searcy, & Lott, 2002). Survey research experts are making significant progress in this area (see Dillman, 2000, for a general discussion) and as more and more households gain Internet access, electronic surveys have the potential to revolutionize survey research practices.

Online Electronic Survey Considerations

In general, surveys e-mailed to sample members as part of a message or as an attachment are quite simple. Project managers contact sample members using an initial e-mail message that contains a cover letter, and participants typically respond by replying to the original message or as an attached file, which they send back. Researchers can compose and send these surveys with relative ease because they generally require few technical skills, and survey distribution is instantaneous. The questionnaire normally appears in a basic text format that is relatively easy for participants to use, although research concerning e-mail questionnaires indicates that respondents may struggle with basic problems such as remembering to reply to an e-mail message so that they can submit their questionnaire or having problems with attachment conversions (Dillman, 2000; Shannon et al., 2002).

Researchers using this method generally cannot encourage survey participation through visual stimulation, and these surveys provide no opportunity for researchers to interact with respondents. In addition, researchers have almost no way to effectively address relatively common aspects of questionnaire design such as skip patterns. Although electronic surveys delivered via e-mail offer researchers a quick and inexpensive way to collect data in a relatively short period of time, researchers also are quite limited in the options they have available as they try to create effective questionnaires and encourage participant response.

When researchers conduct web-based surveys, they typically contact sample members using an e-mail message that contains an appropriate link to the research project. Participants then complete the survey online and submit the completed instrument with the click of a button. Because the web offers flexible and sophisticated design options to research managers, they can design surveys with a number of features to encourage sample members to complete the questionnaire and to provide accurate information as they do so. Web-based surveys allow participants to answer questions involving complicated skip patterns, for example, without their knowledge that the questions are even part of a skip pattern. In addition, researchers can design surveys with a variety of features including graphics and sound, which they can use to encourage respondents to complete a questionnaire. Researchers' use of pop-up instructions makes it easier to help respondents at a time when they actually need assistance, and devices such as drop-down boxes with answer choices help eliminate researchers' use of open-ended questions and help provide high-quality data (Dillman, 2000). Although surveys on the web require the greatest amount of technical knowledge—and because of this, many web-based surveys have been developed by technology specialists rather than survey research experts—they also produce the greatest potential benefit to researchers in terms of the quality of data collection (Shannon et al., 2002). Because of this, the

TABLE 10.3
Characteristics of Electronic Surveys

<i>Selected Benefits</i>	<i>Selected Limitations</i>
Generally inexpensive	Internet access is limited; it is impossible to conduct a representative survey of the general population
Flexible method	Potential participants need reasonably equipped computer and basic computer competence
Reaches widely dispersed sample members easily	Online documents and attachments may reformat so that they are impossible for sample members to open or read
Immediate delivery and potentially quick data collection	Volunteer samples may produce results low in generalizability
No interviewer bias	May suffer from low response rates

challenge for survey research specialists is to integrate appropriate principles of survey design and implementation with electronic survey research (Dillman, 2000).

Online Electronic Survey Critique

The advantages of online electronic surveys are numerous. In particular, electronic surveys typically cost less even than regular mail surveys because of the lack of postage and production costs. Web-based surveys also have a high degree of flexibility. Because of the benefits of immediate delivery, researchers can use these surveys when sample members are widely dispersed geographically. In addition, the substantially shortened time it takes researchers to deliver and receive questionnaires reduces the time it takes for them to complete a project. Interviewer bias generally is not a concern to project managers when they use online surveys, and the availability of sampling lists and password-protected websites allows researchers to conduct probability sampling in some instances.

In spite of these obvious advantages, however, researchers' potential use of online surveys are tempered by the reality that only about 60 to 75% of households in the United States had Internet access as of 2005 (Couper, 2000), and some assert that this number appears to be at a relative standstill or, more likely, climbing quite slowly (Richardson, 2004). As a result, it is impossible for project managers to use an online survey to conduct a general population study with an acceptable level of external validity, or projectability, because up to 40% of the population cannot participate in the survey. This does not mean that researchers cannot use electronic surveys, but it does mean that they must use them to collect information from carefully selected populations. Internet use among college-based populations

such as students and professors, for example, is quite high, and a survey of these populations is less likely to suffer from problems due to a lack of Internet access. Readers also should note that when researchers post surveys on bulletin boards and simply invite participation, the resulting sample is self-selected and not representative of any population. Ultimately, the reliability, validity, and accuracy of a survey's results will be extremely low as a result of these limitations.

Problems with low response rates also are a potential concern to researchers who use electronic surveys. Wimmer and Dominick (2006) report that the click-through rate on an electronic survey, where Internet users access a survey by clicking on a link, is 1% to 30%. Although some researchers undoubtedly can achieve higher participation (Dillman, 2000), this requires additional resources, which increase the cost and time it takes researchers to complete electronic surveys. As before, a low return rate potentially introduces bias into survey results and raises concerns about the validity and reliability of a survey's findings.

In addition, online communication is far from problem free. Documents and attachments sent via electronic mail commonly suffer a host of problems. They may end up reformatted to such an extent that they are difficult or impossible for recipients to open or read. In addition, online projects typically require respondents to have a reasonably equipped computer, and they must possess a basic level of computer competence to participate in a survey. Although most members of some populations have proper equipment and abilities, members of other populations do not. As a result, researchers must use online surveys carefully and interpret their results conservatively. Online electronic surveys have tremendous potential that researchers are just beginning to realize. Currently, many researchers have tempered their enthusiasm and use of this method, however, given the realities of incomplete Internet penetration among U.S. households, which make online surveys problematic for surveying many populations.

PERSONAL INTERVIEWS

When investigators conduct personal interviews, they typically collect information in a respondent's home, office, or other convenient location. Research staff members administer questionnaires in a face-to-face interview, record respondent's answers, and possibly collect other information. There generally are two types of personal interviews: unstructured and structured.

In an *unstructured*, in-depth interview, interviewers ask broad questions and give respondents freedom to respond as they wish. The results of these interviews typically lack a high degree of validity and reliability because of the unstructured nature of the interview and sample limitations. The

TABLE 10.4
Characteristics of Personal Interviews

<i>Selected Benefits</i>	<i>Selected Limitations</i>
Higher response rates	Often expensive; typically highest cost per respondent
Interviews establish rapport with participants	Requires high degree of administration and interviewer training
Often results in high quality data	Data collection may take a relatively long time
Bias from sampling frame often is low	Strong potential for interviewer bias
High degree of interview/questionnaire flexibility	Some sample members difficult to reach

result is that in-depth interviews are largely an informal research method (discussed in chapter 7).

In a *structured* interview, interviewers ask questions in a predetermined order and have less freedom to deviate from the questionnaire, also called a *survey schedule*. The result is an interview process that often produces high-quality data, has a reasonable response rate, and lends itself well to various topics and question types. For these reasons, many scholars and market research professionals have historically favored personal interviewing as a survey research method.

Several factors, however, have reduced the use of personal interviewing for survey research purposes. Factors such as a high cost per completed interview, the long time researchers need to complete a research project, and the need for a high degree of administration and coordination have contributed to a decline in the large-scale use of personal interviews. Nevertheless, personal interviewing is a flexible and effective survey method that serves many survey research project settings effectively.

Personal Interview Considerations

In many research situations, several important benefits result from having an interviewer collect data in a one-on-one meeting with a survey participant (Table 10.4). A face-to-face meeting allows interview staff to interact and build rapport with potential participants, helping to increase survey response rates. In addition, after an unsuccessful contact attempt at the household of a sample member, an interviewer may visit with neighbors or generally observe the characteristics of a household or neighborhood to determine a better time to return for an interview (Groves & Lyberg, 1988). As a result, personal interview surveys historically have had the highest response rates of any of the primary research methods, typically ranging from 65% to 95% (Czaja & Blair, 1996). A high level of personal interaction also increases the likelihood that interviewers will obtain complete and accurate information by creating a comfortable interview atmosphere.

This factor is important when interviews are long or questionnaires contain complex questions or skip patterns. In this instance, the interviewer has a great deal of influence over the administration of the questionnaire and other aspects of the data-collection process.

Personal interviews also are highly flexible, much more so than other survey methods. Research staff can answer respondents' questions; seek additional information to clarify ambiguous responses; show charts, pictures, or graphs; and even estimate respondent information such as general appearance or general living conditions. Finally, personal interviews do not depend on the literacy or education level of respondents, and they are not limited to persons with telephones, computers, or online access. Although this does not eliminate sampling bias concerns in personal interviews, it does address some sampling bias concerns. Ultimately, the use of face-to-face interviews can significantly improve the reliability and external validity of survey results.

Personal interviews, however, are highly susceptible to bias. Interviewer-related bias, or error, occurs in face-to-face interviews when participants vary their answers because of the person conducting the interview (Fowler & Mangione, 1990). Participants who sense that interviewers agree or disagree as they respond to certain questions, for example, may wittingly or unwittingly alter their answers to survey questions. Respondents also may hesitate to report sensitive information and are more likely to provide socially desirable responses in personal interviews (Czaja & Blair, 1996). In research concerning racial attitudes, for example, participants are more likely to give socially desirable responses when the interviewer and interviewee are of different races (Campbell, 1981).

The need for extensive interviewer training and standardized interview techniques is important in personal interview surveys, given the importance of the interviewer in the data-collection process. Although it is difficult to accomplish, a standardized interview process in which all interviewers conduct their work in a consistent manner reduces interview-related error (Fowler & Mangione, 1990).

Two aspects of personal survey administration merit special attention. The first is the need for thorough interviewer training, explained in chapter 12. A well-trained research staff is critical to the success of personal interview surveys. Well-trained staff members help encourage survey participation among sample members; draw thoughtful, relevant responses to survey questions; and produce data that are high in accuracy, reliability, and external validity. Poorly trained staff members, in contrast, are more likely to collect poor quality data and even bias survey results through their actions and statements. Problems may occur when poorly trained interviewers fail to probe inadequate answers, record respondents' answers incorrectly, ad lib questions rather than reading them as written, and behave in a way that could bias respondents' answers. The type and intensity

of interviewer training depends on the goals of the study, the number of interviewers, their previous experience, the study's time frame, and the complexity of the questionnaire, among other factors. In most training sessions, project managers attempt to communicate the goals of the study, develop basic interviewing skills, familiarize interviewers with the questionnaire and objectives for each question, and help interviewers learn to manage difficult interview situations (Warwick & Lininger, 1975).

The second aspect of personal survey administration that merits special attention is appropriate supervision. Proper training must be combined with effective supervision to contribute to a highly successful personal interview project. Field supervision takes place where training leaves off and occurs during actual data collection. The importance of field supervision is heightened in personal interview studies because data collection is decentralized; that is, interviewers necessarily are spread over a relatively broad geographic area. Some of the most critical aspects of field supervision include organizing work groups for neighborhoods or other geographic locations, arranging work assignments for research staff members, establishing production quotas for interviewers, reviewing completed work, serving as a liaison with the research office, and helping maintain a high level of commitment to the study among interviewers (Warwick & Lininger, 1975). Accomplishing these tasks requires strong organizational skills. Fowler and Mangione (1990) suggested that organizations pay attention to five critical aspects of each interviewer's work:

1. The number of interviews each interviewer conducts during a pre-determined time period
2. The number of hours each interviewer works
3. The response rate of each interviewer
4. The quality of each interviewer's completed interviews
5. The overall ability of each interviewer, including interactions with survey participants.

Given the key role of interviewers in the data-collection process and the decentralized nature of personal surveys, interviewer training and effective field supervision contribute greatly to the success of these projects.

Personal Interview Variations

Group-Administered Surveys

Group-administered surveys combine some of the features of personal interviews and some of the features of mail surveys. Researchers give the survey to members of a group who complete the survey individually, usually with minimal input from a survey administrator. Research staff

members typically give group-administered surveys to existing groups of people who are part of a selected sample, such as students, employees, or members of the armed forces. Sometimes, project managers recruit participants at shopping malls and take them to a vacant store location or in-mall research facility where they give them a survey. In this case, staff members typically thank respondents for their participation with a small gift, similar to mail surveys. In each case, research staff members administer the survey in a group setting.

This raises some concerns about group-administered surveys, however. Group members may feel coerced to participate, and if their anonymity is compromised, they may not answer questions honestly. In addition, most group-administered surveys require the permission of organizational management because they typically take place on organizational property. If a survey is sponsored by organizational management or if participants suspect this is the case, they may be less likely to answer questions honestly (Schutt, 1996). In addition, many preexisting groups do not lend themselves to probability-based sampling procedures. Although it is possible to use probability sampling for group-administered surveys—in particular, cluster sampling—it may be difficult for project managers to execute such sampling. When investigators do not use probability sampling, survey results generally suffer from limited reliability and external validity. Group-administered surveys have useful applications, but like all research methods, researchers must use them carefully to produce data that are accurate and reliable.

Computer-Assisted Personal Interviewing (CAPI)

Recently, some research organizations have started conducting personal interviews with the help of laptop computers. In this form of interview, researchers typically load questionnaires directly onto a computer and participants enter their own responses to questions. Following participation, researchers upload the results to a master computer so that they can analyze the data. The main advantages of this type of personal interview is that computers aid in the standardization of survey administration and data collection and help to reduce bias resulting from participant-interviewer interactions. In addition, researchers can use CAPI when survey questions are complicated, and photographs, computer graphics, or other visual aids will help participants understand and respond correctly to questions (Wimmer & Dominick, 2006).

A primary drawback of CAPI is its expense. Even though the price of laptop computers has dropped considerably, the startup and maintenance costs associated with this form of personal interviewing are potentially quite high, especially when researchers need a sizeable number of computers to complete a large number of interviews. When researchers opt

for a smaller number of systems, they likely will experience delays in data collection and even higher maintenance costs.

In addition, CAPI requires participants to have at least a minimal level of computer literacy so that they can complete a questionnaire accurately, which raises concerns about the ability of researchers to use a representative sample. Even though most people now use computers on a regular basis, CAPI would potentially present researchers with difficult challenges if they were attempting to complete a general population survey.

As a final note, some researchers have raised concerns that CAPI is needlessly slow. Although this is not always the case, there is a time–cost tradeoff for researchers to consider. Using more computers reduces the time it takes researchers to collect data, but it costs more money. CAPI has clear benefits in specific interview situations and some researchers are enthusiastic about its potential, but its limitations have hindered its development as a primary form of personal interviewing to date.

Mall Intercept Surveys

Mall intercept surveys, or simply mall intercepts, are a common method of collecting data in a personal interview format. Well-dressed interviewers, typically wearing matching-colored blazers and carrying clipboards, are a common sight in most malls today. Researchers also use different locations for intercept studies, including downtown areas, college campuses, and other areas that attract large numbers of people. When organizations sponsor mall intercepts, they position interviewers at strategic locations throughout a mall and orally administer a survey to shoppers. Interviewers may ask shoppers to fill out a survey in a manner similar to group-administered surveys. They also may provide an inducement for participation.

Mall intercepts offer several benefits that have made them relatively popular, particularly among market researchers. Perhaps most important, researchers can complete a study relatively quickly if necessary, and mall intercepts are inexpensive relative to other research methods. Combined, these two benefits make mall intercepts an attractive research method given the time and budgetary constraints that hinder many research projects. In addition, the method is relatively uncomplicated and provides some flexibility in data collection.

Mall intercepts have some key limitations that researchers need to consider before undertaking a project, however. Perhaps most important is that although a probability-based sampling method is possible in an intercept study, it is difficult as a practical matter. Even if researchers used a probability-based sampling method, the results would generalize to shoppers at a single location. For these reasons, researchers normally use non-probability sampling methods that, although convenient, limit the external validity and reliability of a study's findings. In addition, many shoppers

avoid mall interviews, raising further concerns about the validity and reliability of study results. Interviews typically suffer from poor interview conditions because of noise, foot traffic, and other distractions, and researchers must keep questionnaires short and to the point. Although intercept studies offer benefits in certain circumstances and are popular among research practitioners, researchers must use them carefully and remember that their results suffer from limited reliability and generalizability.

Personal Interview Critique

Researchers use personal interview surveys for several reasons, many of which concern data quality. Historically, researchers conducting face-to-face surveys have achieved high response rates, which are enhanced through prenotification letters and the ability of interviewers to interact with sample members. In addition, interviewers usually can establish a strong rapport with survey participants. This provides them with an opportunity to probe respondents' answers when they are inadequate or unclear. Personal interviews may take place in sample members' homes, which allows them to consult personal records or locate other information. The home also is a comfortable interview environment and tends to make respondents less sensitive to questionnaire length. In addition, sampling frame bias is low when researchers use Census Bureau data as a basis for the sampling frame because all individuals in a population have a chance, at least in theory, of being included in the sample. As a result of these characteristics, researchers can use personal interview surveys to produce high-quality data.

Personal interview surveys also offer interviewers a high degree of flexibility in obtaining research information. One-on-one interviews lend themselves to questions requiring high degrees of depth or detail, and the interviewer can use visual aids or other interview devices as necessary. Interviewers also can explain questionnaire items that are confusing to respondents, particularly if the respondent misunderstands the intent of a question or is confused by a response category. Researchers can even estimate some information, although they should do this sparingly because of the potential to introduce error into survey results. The flexibility of one-on-one interviews also allows interviewers to use complex questionnaires with difficult skip patterns. The flexibility and quality of data produced through personal interview surveys have historically made this research method highly desirable to researchers.

Unfortunately, personal interview surveys suffer from significant drawbacks that have limited researchers' use of this survey method. Probably the greatest drawback to personal interview surveys is cost. Personal interviews generally are the most expensive survey research method. Although cost comparisons are not always available, Czaja and Blair (1996) estimated that a national personal interview survey would cost more than twice as

much as a similar telephone interview survey. These costs result from the need for field supervisors and extensive interviewer training, as well as travel expenses and other costs. In addition, personal interviews generally take longer than telephone interviewing because of logistical complexities. The administration of a personal interview survey is costly and complex when sample members are geographically dispersed. These are significant limitations given the importance of time and cost factors in many research decisions.

Another significant disadvantage in the use of personal interviews is the possibility of interviewer bias. The physical appearance, age, dress, race, sex, and verbal and nonverbal communication skills of the interviewer may influence respondents to provide answers that do not accurately reflect their feelings. In addition, participants may be hesitant to report highly personal behavior. The resulting bias ruins the reliability and generalizability of research results. A high degree of careful interviewer training and field supervision is required to avoid interviewer bias, which also contributes to survey cost and length. Finally, some samples are difficult, or even dangerous, to access for a personal interview. Busy work schedules make it difficult to schedule interviews with many adults. In other cases, sample members live in areas with high crime rates. Each of these sample members is important as potential respondents and researchers must interview them if possible, but reaching them presents a special challenge when conducting personal interview surveys.

FINAL THOUGHTS

Survey research is an indispensable part of organizations' attempts to monitor their internal and external environments, solve complex problems, and plan and evaluate communication campaigns. Despite what some have suggested, there is no best method of survey research, and the potential advantages and disadvantages of each method do not apply equally, or even at all, to every research situation. The best method for a project depends on various situation-specific factors, and because of this, project managers must consider the use of a survey research method in relation to the needs and constraints of each situation.

It is important for practitioners to understand each survey research method because of this. Practitioners serve their own interest by understanding the key issues associated with the use of one survey method over another in a research situation, as well as other critical aspects of survey implementation such as issues associated with the use of probability versus nonprobability sampling. This knowledge allows practitioners to make informed research decisions and engage in sophisticated problem-solving and campaign-management activities.