Guideline 9.19: Use multiple contacts and vary the message across them
Guideline 9.20: Carefully and strategically time all contacts with the population in mind
Guideline 9.21: Keep e-mail contacts short and to the point
Guideline 9.22: Carefully select the sender name and address and the subject line text for e-mail communications
Guideline 9.23: Take steps to ensure that e-mails are not flagged as spam
Guideline 9.24: Assign each sample member a unique ID number
Guideline 9.25: Work within the capabilities and limits of the web server(s)

Quality Control and Testing Guidelines for Web and Mobile Surveys

Guideline 9.26: Obtain expert review and conduct cognitive interviews, experimental evaluations, and pilot studies of web implementation materials and procedures
Guideline 9.27: Test the survey using a variety of devices, platforms, connection speeds, browsers, and user-controlled settings, and test the database to ensure that items are collected and coded correctly
Guideline 9.28: Establish a procedure for dealing with bounced e-mails
Guideline 9.29: Establish procedures for tracking incentives
Guideline 9.30: Establish procedures for dealing with respondent inquiries
Guideline 9.31: Implement a system for monitoring progress and evaluating early completes
Guideline 9.32: Develop procedures to ensure data security

CHAPTER

10

Mail Questionnaires and Implementation

Without a doubt, the Internet and cellular telephone technology have revolutionized the way people in the U.S. communicate, especially the young. Private communications via postal mail have been almost entirely replaced by electronic communications in the form of e-mails, text messages, or updates and messages sent through social networking sites. Postal letters that were once used to keep in touch with distant friends and family members are now rare. Even birthday and holiday cards sent through the mail have been replaced with electronic versions that can be e-mailed or posted to one's wall.

With this change has come a tendency among many surveyors to abandon mail as a survey mode. Many adamantly argue that people with a clear preference for electronic communication in other parts of their life will be unwilling to complete a paper survey and return it by mail. They argue that people, especially the young, will be more likely to complete a web survey or will prefer to answer surveys via an app on their smartphone. They are wrong.

A number of recent studies have shown that mail surveys can achieve reasonable response rates. For example, in 2007 we surveyed residents of two adjacent cities in Washington and Idaho about the quality of life in their community using a mail survey. With a $5 prepaid incentive and four mailings, we achieved a 70% response rate (Smyth, Dillman, Christian, & O'Neill, 2010). In 2009, one of us surveyed Nebraska residents about the quality of life in that state. This survey used five mailings but no incentive and yielded a 54% response rate (Olson, Smyth, & Wood, 2012). In a 2008 survey of Washington State residents about community satisfaction and quality of life issues and a 2009 survey in the same state about economic conditions, 57% and 59%, respectively, responded to the mail survey. Both of these surveys utilized a $5 incentive and four mailings (Messer & Dillman, 2011). Finally, a 2012 survey of Washington residents about water issues in their state yielded a 53% response rate. A parallel survey of Nebraska residents about water issues in Nebraska yielded a 58% response rate. Both of these surveys used four mailings with a $4 prepaid incentive and an additional $2 incentive included with the third mailing (Edwards, Dillman, & Smyth, 2013a, 2013b).

Each of these studies demonstrates that when carefully planned and implemented, mail surveys can do reasonably well and achieve response rates of 50% or higher. Other research has also shown that when respondents are given a choice of answering by mail or another mode, they most commonly choose mail, at least when the paper questionnaire is included with the mailing. For example, in an

experimental treatment in our survey of residents from the two adjacent cities in Washington and Idaho, we gave sample members the choice of answering by mail or web. Half answered by mail and only 13% answered by web (Smyth et al., 2010). In an earlier study, sample members to a 1993 national test Census conducted by the U.S. Census Bureau were given the option of responding by mail or calling in to respond by telephone. In this case, about 64% responded by mail and only 6% by telephone (Dillman, West, & Clark, 1994).

These studies indicate that people are willing to complete well-designed mail surveys, and many prefer responding to a paper questionnaire than to other modes. But even those who claim to prefer other modes seem willing to complete mail surveys (Olson et al., 2012), as discussed more in Guideline 11.14. Also, the delivery sequence file (DSF) discussed in Chapter 3 provides good coverage of households in the United States, making mail surveys of the general public quite effective. But in addition to asking people to respond by mail, each of these studies had a number of other characteristics that contributed to their success. Most of them used prepaid incentives but some did not. They used different numbers of mailings and the sponsoring organization differed across them. They each also differed in appearance and how they were packaged and delivered to sample members.

In this chapter, we focus on how to design effective mail-only surveys like those just described. This includes considerations for designing mail questionnaires that have not been covered in the previous chapters and discussion of how to field that questionnaire in ways that will maximize response rates and reduce nonresponse error. While we focus heavily on mail surveys (i.e., paper surveys that will be delivered via postal mail), the questionnaire design guidelines we provide apply equally well for paper surveys that will be delivered through means other than postal mail (e.g., paper and pencil intercept surveys or those administered in a classroom setting).

GUIDELINES FOR DESIGNING PAPER QUESTIONNAIRES

When the first edition of this book was published in 1978, it was quite difficult to use graphical design features effectively to guide respondents because paper questionnaires were typically produced in black and white using typewriters. Vertical spacing, leader dots, and hand-drawn lines were among the few features that could be used in a design. Rapid computer and printer technological advancement means we now have a whole host of graphical possibilities at our fingertips, including, among other things, the ability to use color, bolding, font variation, graphics, and shading in the design of our questionnaires. We can even customize paper questionnaires by inserting variable information into them while they are being printed, resulting in each respondent getting a unique questionnaire. Thus, we now have choices that were considered impossible not long ago.

However, paper surveys also have certain limitations that distinguish this mode from others. They lack the computerization and interviewers of other modes, meaning we have to communicate to respondents how to follow skip instructions on their own and it is not possible to incorporate answers to earlier questions into later questions in helpful ways. Nor is it possible to provide automatic totals or feedback when answers to questions are inconsistent with answers to previous items (e.g., when the total number of people in the household

is inconsistent with the number of people enumerated). In addition, it is easy for paper respondents to peruse the entire questionnaire to get a sense of its length and the topics covered and to answer questions out of the intended order. These limitations mean we have to be very strategic on our design of paper surveys in order to help respondents get through them as we intend.

Guideline 10.1: Determine Whether Keypunching or Optical Imaging and Scanning Will Be Used, and Assess the Limitations That May Impose on Designing and Processing Questionnaires

Keypunching (i.e., entering the data from a questionnaire into an electronic database) has become an increasingly significant cost for those using paper questionnaires. It is now possible to avoid much of that cost by using software to design, scan, and process questionnaires optically. Current optical scanning options scan an image of the entire questionnaire into a computer and then read the marks on the page into a data spreadsheet. A threshold can be set for entering or flagging items. For example, if the software is not 99% (or 95% or 90%) sure of the intention of a mark (i.e., that it is intended for a specific answer space or what letter or number it is), it will flag the case to be looked at and interpreted by a human. In this way, most of the data entry can be handled by software, with people only having to intervene on the most difficult cases, saving time and money at the data-entry stage. Whereas in the past the optical scanning software and hardware severely restricted questionnaire design, new systems allow much more design flexibility.

Although different software packages require different kinds of marks, it is important to recognize that the shape and size of spaces one provides send a message about what kind of mark is desired. For example, as shown in Figure 10.1, a small circle (or oval) encourages respondents to fill in the space entirely with a pencil or pen, whereas large ovals encourage ticks or check marks. Check marks are a preferred mark in some cultures because of *X*s being associated with receiving a bad mark in school. When one wants respondents to use an *X*, as is desired in other cultures, a square box should be provided. However, if this box is too small, it will encourage the use of check marks as respondents attempt to "hit" the small box with the bottom of the check mark. Such marks are often problematic for processing because of their less controlled nature, which results in the long line after the point reversal, interfering with the reading of nearby answer spaces. In addition, intensive observation of completed questionnaires has revealed that rectangles encourage the use of check marks that produce similar interference with nearby response areas.

A significant barrier to the early development of scannable questionnaires was the entrenched belief that respondent handwriting would be too divergent to ever allow software to read it effectively. In retrospect this turned out to be a case of defining a problem incorrectly. Rather than avoiding scanning, respondents just needed to be encouraged to write more clearly, for example, by printing instead of using cursive. The use of narrow lines or tick marks to segment answer boxes into a series of connected one-character spaces encourages people to print letters rather than use cursive (Dillman, 1995). It has also been observed that the use of colored backgrounds to surround white answer spaces encourages further improvements in writing by helping people stay inside the answer spaces. Likewise, it is important