

Before we begin our discussion of the merits, and limitations, of Web and e-mail surveys, it is instructive to note a few things about the survey process in general.

When part of a research program, surveys usually are designed to permit formal statistical inference about some larger population given certain information collected from a subset of that population. Choices in survey design—including those of contact mode, response mode, and sampling methodology—must be made and those choices must be evaluated in light of the cost implications and the subsequent effects those choices may have on data quality and the precision of survey parameter estimates. These choices must be made early in the research planning process and many times are based on what is, and what is not, known from other similar surveys.

The Internet has introduced innovations that have spawned new methods for conducting surveys, most notably surveys done via electronic mail (e-mail) and the World Wide Web.<sup>1</sup> In e-mail surveys, the survey instrument is contained in the main body of the e-mail message or in an e-mail attachment. In many cases, the respondent can complete the survey by simply replying to the original e-mail. Web surveys are “hosted” (that is, they reside) on a Web site. The respondent visits the survey Web site by either clicking a hyperlink in

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<sup>1</sup>Computer-aided telephone interviewing (CATI) and computer-aided personal interviewing (CAPI) are other notable technological advances in surveying. They are unrelated to the development of the Internet and therefore we do not examine them in this report. In fact, for the purposes of our work, we consider CAPI to be another form of in-person interviewing and CATI to be another form of telephone interviewing.

an e-mail or in another Web site, or by typing the Web address directly into the address box in the browser window.

Internet surveys have been both hyped for their capabilities and criticized for their limitations. To put Web and e-mail surveying in perspective, it is instructive to examine what was written about telephone and mail surveys when they were still regarded as unproven survey methodologies. In 1978, Don Dillman, a noted authority on surveying, said the following about mail and telephone survey questionnaires:

Neither mail nor telephone has been considered anything more than a poor substitute for the much heralded face-to-face interview. Perhaps this view [is] justified, because the two methods had many deficiencies and problems. Surveys by mail typically elicited extremely low response rates, even with short questionnaires. . . . Further, it was not possible to reach many people by mail questionnaires; among those to whom questionnaires could be delivered, the best educated were far more likely to respond. Even completed questionnaires left much to be desired. . . . It is not surprising, then, that users of the mail questionnaire treated response rates well below 50 percent as “acceptable” and explained away problems of data quality with disclaimers such as, “this is the best we can expect from a mail questionnaire” (Dillman, 1978, pp. 1–2).

Not unlike the situation with mail surveys in the 1970s, many questions and concerns exist about how to best conduct Internet surveys and whether they are, in fact, scientifically valid. If you substitute “Internet” for “mail” and substitute “mail” for “face-to-face” in the first sentence of the Dillman quotation, the statement will accurately reflect much of the criticism directed at Internet surveys today. Therefore, it may be wise to consider Internet surveys as an alternative to traditional mail and phone surveys. Nevertheless, Internet-based surveys do have advantages over more-traditional methods in certain applications, and the use of this medium will continue to expand.

Internet surveys currently are in vogue largely because of four popular assumptions about how they stack up against more-traditional survey mediums: (1) they are less time consuming; (2) they are just as good or better than more-traditional surveys; (3) they are much cheaper to conduct; and (4) they are easier to execute. However,

these assumptions may or may not be true depending on the individual circumstances of the survey. Furthermore, with the hype surrounding the Web in recent years, researchers sometimes base their decision on whether or not to conduct Web surveys on something other than substantive information. Therefore, researchers need to recognize the current limitations of Internet surveys.

To this end, this report offers information for researchers who must make an informed decision on whether Internet surveys are appropriate for their needs. We base our recommendations on evidence from the literature,<sup>2</sup> our own experiences in conducting Web surveys, and our discussions with fellow Web survey researchers, including individuals at the U.S. Census Bureau and the U.S. Air Force Surveys Branch.

Chapter Two of this report contains general background information on conducting surveys; in particular, we discuss important issues that one must keep in mind when planning a survey. Chapter Three presents a literature review of Web and e-mail surveys. Chapter Four addresses how to decide what type of Web survey to conduct, while focusing on the distinction between probability and convenience sampling. Chapter Five provides guidelines for designing and implementing Web surveys. Chapter Six offers case studies, and Chapter Seven presents our conclusions.

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<sup>2</sup>The references in this report provide a complete list of the literature used in this study. We also specifically recommend the following reading by topic area: practical survey implementation—American Association for Public Opinion Research (1997), Dillman (2000), Fowler (1993), and Groves (1989); Web survey implementation—Couper (2000) and Dillman (2000); Sampling—Cochran (1977), Henry (1990), and Kish (1965); Web resources—[www.websm.org](http://www.websm.org).