

**Online Panels for Social Science Research:  
An Introduction to The StudyResponse Project**

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In recent years, the Internet has become a useful new vehicle for recruiting research participants and administering surveys and other types of research. Using the web for participant recruitment addresses some of the long-standing criticisms of other participant recruitment methods (Reips, 2000). One common criticism of participant-based research (i.e., as opposed to policy research or archival research) is that too much of the research is undertaken with college students as participants (McNemar, 1942, in Reips, 2000; Schultz, 1972; Smart, 1966). In contrast, a major advantage of the Internet as a participant recruiting mechanism is that researchers can reach a more varied audience than they can with traditional methods. Given the low incremental cost of distributing research instruments electronically, the Internet can also facilitate collection of larger sample sizes. From an ethical standpoint, participants who wish to withdraw from research may feel more comfortable doing so with the relative anonymity of an Internet connection. Finally, the ubiquitous web browser provides a convenient and powerful interface for presenting interactive research materials (e.g., skip patterns in surveys, multimedia presentations, customized feedback). All these advantages have translated into a wave of published studies using Internet-based samples.

Despite the advantages of using the Internet to recruit participants and collect data, there are also numerous possible disadvantages to doing participant-based research via the Internet. One prominent pitfall lies in differential access to the Internet for different demographic groups: Internet samples in some studies have reported older participants, a slightly greater proportion of males, more married individuals, longer work weeks, greater job tenure, and a smattering of moderate differences on substantive variables. Other disadvantages of Internet-based research include a frequent inability to ascertain response rates; a lack of control over who responds to research instruments and when and where they do so; the possibility of receiving multiple and/or malicious responses from some individuals; and a lack of knowledge about method biases that may differ from traditional research methods.

Given the clear popularity of the Internet as a medium for finding participants, soliciting participation, and administering research, it appears certain that social science researchers will continue to use the Internet for participant-based research despite the methodological pitfalls. With the importance of survey and related types of participant research, particularly to the extent that research outcomes influence public policy, consumer decision-making, and organizational practices, it seems risky to ignore the various problems lurking inside the typical web-based research study. One systematic way of increasing knowledge of methodological issues associated with using Internet methods would be to create an Internet study administration system usable across multiple primary studies. Creating such a system would facilitate accumulation of data on methodological variation among studies and analysis of that data to answer methodologically focused research questions using the study as the unit of analysis.

In 2000, the authors of this report initiated a project with potential to illuminate some of the key methodological questions in Internet-based participant research, while also providing a vehicle for primary social science researchers to conduct better studies. Specifically, with the institutional review board approval, we developed an Internet-based standing research panel of many thousands of individuals who have expressed interest in and volunteered to be contacted with solicitations for participation in online research. Each volunteer has provided comprehensive demographic information and an email address as part of the initial process of joining the panel. We have made this panel of volunteers available to researchers for non-commercial, scholarly research projects and have done so at no cost to the researchers (other than their own expenses for instrument development and participation incentives).

This standing panel is the one of two elements of the “StudyResponse” project (see <http://www.StudyResponse.org>; hereafter referred to simply as StudyResponse). StudyResponse comprises two elements: 1) a large collection of volunteer research participants who have agreed to receive solicitations to participate in scholarly research, and 2) a partially web-based, database-driven study administration system. Primary researchers who wish to conduct studies over the Internet contact a member of our research team and request the use of the panel as a source of participants for their study. A member of our research team vets the proposed study. This process includes obtaining a copy of the institutional review board approval; reviewing the research instrument and data submission methods to assure the confidentiality and anonymity of the respondents; checking the informed consent interface, instrument interface, and the debriefing interface; and reviewing the feasibility of sampling and recruitment plans. Primary researchers create and host their own research instruments, although with the availability of many low cost services for this purpose, this rarely presents a barrier. Next, the StudyResponse system functions as a “remailer” by forwarding primary researcher’s requests for participation to the sampled panelists. By distributing the solicitations ourselves, we help assure anonymity for the research participants (primary researchers never see the addresses and never learn panelist identities). This process also facilitates the creation of custom mail merges that can personalize the solicitation message. The solicitation contains a reminder of a randomly chosen panelist ID number, which the respondent enters into the primary researcher’s web-based research instrument.

In return for using the panel, primary researchers provide us with methodological data about their study, including the ID numbers of individuals who responded, what kind of incentive they used, and a copy of the instrument, from which we code the topic, length, user interface layout, and so forth. We use the respondent ID numbers to segment the original sample into respondents and non-respondents. At the request of the primary researcher, StudyResponse sends reminder messages to non-respondents after a specified interval has passed. After the study’s final response deadline, we segment the post-reminder group, this time into late respondents and non-respondents. At the close of the primary study we can thus link panelist ID numbers to individual level demographic information for members of three groups: respondents, late respondents, and non-respondents. Occasionally, with the cooperation of primary researchers, we have had the opportunity to obtain additional individual level information about response patterns, including proportion of missing data fields, summary measures of data variability, multiple response, partial response, and blank response.

Demographics of the overall panel “population” have varied over time and closely reflect the recruiting methods we have used. To recruit panelists, we created a web site and an accompanying database system. Among the pages that comprise the site are a “splash” page

describing StudyResponse, participant and researcher information pages, and information on registration, compensation, and logistics. We used a snowball sampling methodology to initiate panelist recruitment. We began by sending email messages to contacts asking them to consider signing up and to forward the notice to others who may have an interest in the project.

Participants registered for the panel via the StudyResponse web site, where they provided their name, e-mail address, demographic information (race, sex, age), educational level, employment situation, employment category, and work experience. In each study's recruitment message, we included requests for panelists to make referrals, and we noticed that the panel size tended to swell in the wake of each completed study, presumably as a result of these referrals.

Our referral-based panelist recruiting strategy has led to some demographic skews relative to reference groups (e.g., the Georgia Institute of Technology's Graphics and Visualization unit's 10th annual survey of Internet users; GVU 10th survey). For example, the panel is approximately 75% female compared with two-thirds male for the GVU 10th survey and an even split for the U.S. census. Moreover, at the inception of the panel, the gender imbalance was considerably less, 55% female and 45% male. We conducted time series analyses of panel subscriptions over the life of the panel that revealed spikes in new panelist subscriptions after the completion of each study, suggesting that individuals were referring their acquaintances to the site. We hypothesized, and time series analyses supported, a mechanism whereby individuals were more likely to refer other individuals of the same gender to the site. Implications of this referral skew mechanism likely extend beyond gender imbalance. The same forces that made the panel "more female" over time may make the panel homogeneous in other ways. Of course, these skews in the overall panel are not necessarily significant to the primary researchers, because, for instance, we normally stratify on gender to ensure a roughly equal proportion of males and females in the recruited sample. At this writing we are in the process of developing strategies for restoring the gender balance of the panel as well as more closely scrutinizing other sources of demographic skew.

**Conclusion.** We believe that there are several beneficial impacts from the development of the StudyResponse system and panel. The first benefit lies in the availability of a reliable participant recruiting resource for primary researchers. The continued availability of such a resource will help to make online research a realistic possibility for supporting the work of many U.S. social scientists in a variety of subject areas. Beyond access to participants, we believe that there is also strong potential for enhancing the quality of these primary studies as a result of the controls over sampling and administrative tasks that StudyResponse provides. Although the panel will never perfectly represent larger populations, drawing from a finite universe of volunteer research participants enables researchers to compare respondents with non-respondents, compare early with late responders, use pre-notices and reminders as appropriate, and calculate exact response rates.

A second beneficial impact is the increase in the ethicality of primary research that uses the Internet to recruit participants. One problem with Internet-based research that fails to use "opt-in" procedures is that researchers can be accused of "spamming." By using participants who have already given their consent to be contacted, the chance of invading participant privacy during the recruitment process is greatly reduced (see Cho and LaRose, 1999, for a discussion of Internet participant privacy). A related benefit is that it will be possible to avoid over-sampling the same participants; this will reduce the likelihood of "survey fatigue." This may support higher quality or more motivated responses.

There are benefits for the scholarly research community as well. The first will be the eventual availability of a reference database for meta-analysts. By having a central clearinghouse of information on primary studies, meta-analysts will be easily able to access the information they need. Centralizing methodological information will also facilitate answering methodological research questions with the study as the level of analysis.

Perhaps the most important beneficial impact, however, will accrue from the insights we hope to obtain from the study-level analysis of methodological variation. Using the Internet for the administration of multiple primary studies will provide both high quality data and a large amount of data about methodological variation. We believe that the insights we will obtain from analyzing the data will help illuminate some of the most vexing methodological difficulties that have historically affected self-report studies (e.g., the effects of non-response bias on substantive results). These insights will have the potential to enhance the quality of future research in ways that can increase the meaningfulness of conclusions and implications drawn from self-report research. In turn, this outcome may, in some modest but important ways, increase the confidence in and value of social science research that is used to inform public policy and related applications of importance.

#### References

Cho, H., & LaRose, R. (1999). Privacy issues in Internet surveys. *Social Science Computer Review*, *17*, 421-434.

McNemar, Q. (1942). Opinion-attitude methodology. *Psychological Bulletin*, *43*, 289-374.

Reips, U. 2000. *The Web experiment method: Advantages, disadvantages, and solutions*. In M. Birnbaum (Ed.), *Psychological Experiments on the Internet*, pp. 89-117. San Diego: Academic Press.

Schultz, D.P. (1972). The human subject in psychological research. In C.L. Sheriday (Ed.), *Readings for experimental psychology* (pp.263-282). New York: Holt.

Smart, R. (1966). Subject selection bias in psychological research. *Canadian Psychologist*, *7a*, 115-121.