

6-1-2004

## Collecting Research Data Online: Implications for Extension Professionals

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### Recommended Citation

O'Neill, B. (2004). Collecting Research Data Online: Implications for Extension Professionals. *The Journal of Extension*, 42(3), Article 24. <https://tigerprints.clemson.edu/joe/vol42/iss3/24>

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## Collecting Research Data Online: Implications for Extension Professionals

### Abstract

This article describes advantages and disadvantages of online research data collection. Two major advantages are reduced cost and fewer respondent errors and omissions. Two major disadvantages are biases inherent in the data collection process and possible security or confidentiality concerns. Cautions include the need to clearly state limitations in the generalizability of findings and to obtain university IRB approval for the collection of data from human subjects.

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Internet-based education and research tools are here to stay. A recent *Journal of Extension* article (Edwards, McLucas, Briers, & Rohs, 2004) described the delivery of distance education programs for time-pressed Extension faculty. Three other articles (Peterson, Kratzer, Leech, Stadler, Roberts, & Sumner, 1999; O'Neill, 2003a and 2003b) describe Web-based self-assessment tools for consumers that generate data for research. This article describes the advantages and disadvantages of online data collection and suggested implementation strategies.

### Finding the Time to Conduct Research

Extension educators frequently have "robust schedules" (Edwards et al., 2004). In states with tenure systems, there is an expectation that Extension faculty, including county-based field agents, conduct applied research and publish or present their findings to contribute to the body of knowledge of their discipline. So how does an Extension educator add applied research to an already overloaded schedule? What if funding and access to databases are limited and technical assistance is unavailable or located hours away at the land grant university? The answer is to "work smarter" using the Internet to collect research data.

Rutgers Cooperative Extension (RCE) currently offers nine "Personal and Family Wellness Assessment Tools" with five linked to research studies. These quizzes can be found at [www.rce.rutgers.edu/fchs/assessmenttools.asp](http://www.rce.rutgers.edu/fchs/assessmenttools.asp). Each assessment tool has two purposes: provide users with instant feedback on some aspect of their lives (e.g., finances) and generate data for ongoing empirical research about participants' current behavioral practices. Results are also used as a clientele needs assessment to inform future Extension programs.

### Advantages and Disadvantages of Online Surveys

Advantages of collecting survey data online include: reduced cost (i.e., copying, postage, and labor), higher response rates, lack of geographical boundaries, and fewer respondent errors and omissions than paper surveys. The marginal cost of surveying is also reduced, making larger samples possible (Cude, 2004). As with any survey, response rates generally increase if messages and questions are concise (Lyons, Cude, Gutter, & Lawrence, 2003).

Disadvantages of online surveys include biases inherent in the data collection process. A portion of the U.S. population lacks Internet access and/or experience with electronic surveys. Many are older and minority household heads or those with modest incomes and education (Madden & Rainie,

2003). There may also be security and confidentiality issues involved. Finally, researchers may not be able to calculate response rates as is typically done with mailed surveys that are sent to a known number of respondents (Cude, 2004). A response rate cannot be determined unless the target audience for a Web-based survey is a known and finite group.

## Online Research Tips

Extension educators should consider the following suggestions by Cude (2004) and Lyons, Cude, Gutter, and Lawrence (2003) to enhance online research effectiveness:

- Develop an introductory screen that is concise, motivational (e.g., describes the ease of responding) and clearly instructs respondents how to proceed.
- Make the first question easy to answer and fully visible on the first screen.
- Avoid differences in the visual appearance of questions.
- Use the same question and answer format found on paper questionnaires.
- Use drop down boxes sparingly, and identify them with a "click here" command.
- Don't require respondents to answer each question before they can answer subsequent questions.
- Allow respondents to scroll from question to question rather than one screen at a time.
- Provide "skip directions" to encourage clicking to the next applicable answer.
- Use "reminder e-mails" sparingly due to concerns about "spamming" and increased use of spam filtering software.

Web-based surveys can be constructed in cooperation with campus-based Web support personnel, technology consultants paid with external grant funds, or by using Web sites such as <http://www.surveymonkey.com>, <http://www.surveypro.com>, <http://www.advancedsurvey.com>, and <http://www.zoomerang.com>. If survey access needs to be limited to a specific target audience, a PIN number or password can be used, as is commonly done with online ballots for professional organizations. A good reference on Internet survey design is Dillman (2000).

## Summary

Online surveys are a convenient way for Extension educators to conduct applied research inexpensively right from their offices. One benefit of conducting research online is the potential for large sample sizes (depending on how well the Web link is marketed). Another is the ease and low cost of data collection. For example, the *Financial Fitness Quiz* <<http://www.rce.rutgers.edu/money/ffquiz/default.asp>> and other Rutgers Cooperative Extension online self-assessment tools use a Microsoft Access database that is exported into Excel for subsequent statistical analysis.

Cautions include the need to clearly state the limited generalizability of survey findings from non-random, convenience samples and to obtain university Institutional Review Board (IRB) approval for the collection of data from human subjects. Generally, researchers must complete a form that describes the purposes and methodology of their study and attach samples of their online research instruments and informed consent instructions. Online respondents can be prompted to click an "I accept" [terms and conditions] box similar to those seen when software is installed.

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