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## Web Survey Methods

David R. Johnson  
 Professor of Sociology, Human Development and Family Studies, and Demography  
 Former Director Penn State Survey Research Center  
 Pennsylvania State University  
 University Park, PA

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## The Allure of the Web Survey

- Fast
- Cheap
- Do-it-Yourself
- The Wave of the Future
  - Web coverage increasing rapidly
  - Rapid advances in computer and networking technology

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## ..and the Reality

- **Speed.** If you want a good response rate it may take as long (or longer) to field as a telephone or mail survey. In some situations can be very fast.
- **Cost.** Start up and total costs can be higher than found in other survey modes. High cost per completed survey for studies with a small N because of technical costs.
- **Do-it-yourself?** Still a need for skilled web programmers to host and prepare complex surveys.
- **Method of the future?** Perhaps, but sampling problems and coverage issues present real obstacles.

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## What is a Web Survey?

- A survey conducted in a web browser.
  - Internet Explorer, Firefox, Netscape, etc.
- Normally it is conducted over the internet but it is sometimes done the local computer.
- The survey is hosted on a web server and the responses are stored on the server.
- The respondent accesses the survey by clicking on a link to web site hosting the survey.
- The survey is usually written in some form of HTML.

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## How does this differ from an e-mail survey?

- In an e-mail survey the survey instrument is imbedded in an email sent to the respondent.
- The respondent replies to the e-mail and fills in their answers in their reply.
- Disadvantages of this method.
  - Difficult to automatic the data extraction process.
  - HTML based messages can help but may people elect not to receive in this format because of security concerns.
- Generally, it is better to have a URL embedded in the e-mail for the respondent to click on to access the survey.

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## In what situations is a web survey the best choice over traditional methods (mail, telephone, etc.)?

- As an option for a survey primarily conducted in another mode.
- When everyone in the sample population has a valid and know email address.
  - University Students
  - Employees of a business/organization
  - Clients of a health plan
  - Members of a professional organization
- Special populations recruited on-line or "convenience" samples
  - People visiting a special interest web site (e.g. diabetes web site)
  - Often good for recruiting respondents from "rare" populations, using web survey panels ( to be described in more detail below)
- The survey is "multi-media" or "interactive" in some way.
- When a representative sample is not as critical but rapid turn around is important.

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### How valid and reliable are answers provided on web surveys compared to other survey modes?

- Substantial evidence that a web survey can yield valid and reliable responses from participants.
- May be better than a telephone or in-person survey for very sensitive items (because no interviewer interaction involved).
- Some evidence that non-response to items tends to be higher in web surveys.

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### What kind of response rate can I expect from a web survey?

- Response rates generally are lower than found in other modes, but not always. (5 to 40%) Good response rates in any mode requires multiple follow-ups, incentives, and carefully designed instruments.
- Incentives help with response rate but are harder to use and probably have less effect in web surveys than in other modes.
  - Hard to send people a pre-payment, which is generally the most effective.
  - Use of drawing and lotteries can help.
  - Respondent can print out coupons or certificates for merchandise after they complete the survey.
  - Email follow-ups of non-respondents are almost always used (if email addresses are available).

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### How do I get a sample for a web survey?

- Conducting a web survey of a representative sample of a geographical area (National, State, City, ...) is almost always not possible.
- Many e-mail lists that can be purchased, but will be biased, usually against persons how do not have internet access ("The digital divide")
- E-mail lists are not like address lists or telephone samples, which tend to be more representative.
- Web Survey "Panels" are one option if a representative web survey is desired.


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### Web Survey Panels

- Large compellations of email addresses of persons who agreed to respond to surveys.
- Some have several million people on the panel.
- Can either purchase part of the panel, or can have the organization field the survey on a sample of their panel.
- Panel is recruited in several ways. Need to be careful about finding out what method was used.

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### Examples of two Commercial Web Panels

- **Knowledge Networks**
  - Recruited panel participants primarily with an RDD telephone survey.
  - Those without web access were given a free web appliance and account "Web TV".
  - Continually recruit new members to replace dropouts.
  - All panel participants complete a background survey used to draw selective samples.
  - They will set up and conduct web survey on their panel for you for a price.
  - Has been used for government and academic web surveys.
- **Harris Interactive**
  - Primarily recruited from email addresses harvested from the web.
  - Used "propensity weighting" methods to make the panel more representative.
  - Will set up and conduct web survey on their panel for you at a price.

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### Advantages of Survey "Panels"

- A cost effective method of surveying a relative rare subgroup (although not always representative).
- About as close as you can get for a web survey to a nationally representative sample.
- You just provide the questions, they field the survey and do the setup.

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## The Downside of Survey "Panels"

- Response rates are often very low.
  - Recruitment response rate 20 – 30% max.
  - Response rate to individual surveys is around 60% or less.
  - Multiply these together you get a max response rate of (.3 x .6) 18%
- High panel turnover rates and recruitment techniques raises questions about response biases. This may bias certain kinds of survey items more than others.
- Can be relatively expensive.

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## Other ways of conducting a web survey

- Many academic survey organizations will conduct web survey. May need to provide the sample.
- Some commercial and academic survey organizations will host the survey for you on their web servers but you do the rest.
- Do-it-yourself. Commercial web survey software is available that you can purchase to set up your own web surveys and host them yourselves or have them host them.
- About any combination of sample, setup, hosting, and data-extraction is possible.

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## How do you invite people to participate in a web survey?

- Best to use email to invite rather than regular mailed invitation. Usually yields a higher response rate.
- Be careful sending out mass email invitations. May be treated as spam.
- Can use both a mailed letter and an email invite. This is especially useful if you are sending a pre-incentive (e.g., \$2 cash).
- Respondents can also be solicited from web sites. Can be effective if nothing else is available but has risks.

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## Best Practices for formatting the Survey Instrument

- Only a few questions per page
- Use graphics and animation sparingly
- Provide some indicator of progress
- Permit respondent to finish survey later
- Password protect the survey
- Don't force answers to questions
- Automate skip patterns
- Use special web survey software (not just HTML)

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## Human Subjects (IRB) issues with web surveys

- Data security and confidentiality
  - Secure server is used
  - encrypted data used
  - Access controlled by ID and password
- Consent form is usually required.
  - May require disclaimers about possible breaches of confidentiality
  - May require that you tell the respondent that they only have to answer the questions they want to answer. Make sure your survey software allows this.

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## Implied Informed Consent Form for Social Science Research

- The Pennsylvania State University
- Title of Project:
- Principal Investigator:
- Purpose of the Study:
- Procedures to be followed:
- Discomforts and Risks: There are no risks in participating in this research beyond those experienced in everyday life. Although a few of the questions may appear personal and cause a little discomfort, we have tried to limit such questions to the minimal.
- Benefits: This research will provide a better understanding ...
- Duration: It will take about X minutes to complete the survey.
- Statement of Confidentiality: Your participation in this research is confidential. Your confidentiality will be kept to the degree permitted by the technology used. No guarantee can be made regarding the interception of data sent via the internet by any third parties. The following may review and copy records related to this research: The Office of Human Research Protections in the U.S. Department of Health and Human Services; Penn State University's Social Science Institutional Review Board, and Penn State University's Office for Research Protections. In the event of any publication or presentation resulting from the research, no personally identifiable information will be shared or reported.
- Right to Ask Questions: You can ask questions about this research. Contact PI at xxx-xxx-xxxx with questions. You can also call this number if you have complaints or concerns about this research. If you have questions about your rights as a research participant, or you have concerns or general questions about the research, contact Penn State University's Office for Research Protections at (814) 865-5775. You may also call this number if you cannot reach the research team or wish to talk to someone else.
- Payment for participation (if applicable): Participants will automatically enter into a random drawing for one of the four \$xxx cash awards. You are also offered to receive a copy of the research report when it is published in a journal. Total payments within one calendar year that exceed \$600 will require the University to report these payments to the IRS annually. This may require you to claim the compensation that you receive for participation in this study as taxable income.
- Voluntary Participation: Your decision to be in this research is voluntary. You can stop at any time. You do not have to answer any questions you do not want to answer. Refusal to take part in or withdrawing from this study will involve no penalty or loss of benefits you would receive otherwise.
- You must be 18 years of age or older to take part in this research study.
- Completion and return of the survey implies that you have read the information in this form and consent to take part in the research.
- This informed consent form was reviewed and approved by the Office for Research Protections or Social Science Institutional Review Board at The Pennsylvania State University on (insert approval date). It will expire on (insert expiration date).
- Please keep this form for your records or future reference.
- I consent to take the survey
- I do not consent to take the survey

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### ***What software is available to set up a web survey myself?***

- There are many vendors of web survey software. WebSM.org has a list of several hundred vendors.
- Some are designed for "do-it-yourself" folks, others for survey organizations with more technical resources.
  - *Survey Monkey* is generally a do-it-yourself package.
  - *Perseus Enterprise* is designed for web server based applications.
- Most are designed for marketing and commercial applications and may not meet security and password requirement for academic surveys.
  - *PsychData* is specifically designed for academic researchers and when they host the survey it will usually meet IRB requirement.

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### ***Where can I find more information about web surveys?***

- Don Dillman book: *Mail and Internet Surveys: The Tailored Design Method. 2007 Update with New Internet, Visual, and Mixed-Mode Guide*. John Wiley and Sons.
- Rand on-line book: Matthias Schonlau, Ronald D. Fricker, Marc N. Elliott. *Conducting Research Surveys via E-mail and the Web*. [http://www.rand.org/pubs/monograph\\_reports/MR1480/](http://www.rand.org/pubs/monograph_reports/MR1480/)
- WebSM.org site. *Web Survey Methodology* site. This site contains links to many resources related to web survey. Including software, research on web surveys, an extensive bibliography, and guides, standards, and best practices.

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### ***Web Survey in Health Research***

- May be effective for surveys of health organizations, or as an option on a mail survey study.
- Surveys of rare populations. People with specific diseases or health conditions.
- Health plans that regularly use email with participants can use web surveys for patient satisfaction surveys.