

E-MAIL AND INTERNET SURVEYS

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Presentation Agenda

- Brief Introduction
- Construction of E-mail and Internet Surveys
- Response Rate and Other Problematic Issues
- Innovations in E-mail and Internet Surveys
- Privacy Issues in E-mail and Internet Surveys

Introduction

- E-mail and Internet Surveys are the most profound innovation in survey methodology since the introduction of telephone surveys in the 1970s
- Definitions
 - ▣ E-mail Survey: Essentially: “little more than a simple text message, and its construction may require computer skills no greater than those needed for composing and sending a message to a friend” (Dillman, 2000).
 - ▣ Internet or Web Surveys: A survey answered with a web browser.

Discussion Question

- What are some major advantages and disadvantages of E-mail and Internet Surveys?



Unique Aspect of Internet Surveys

- Internet surveys are self-administered
- Internet surveys are computerized
- Internet surveys are (mostly) interactive
- Internet surveys are distributed – there is a lack of uniformity in the hardware/software used by respondents to take the survey
- Internet surveys are rich visual tools

Advantages of Web/Email Surveys

Cost savings stemming from eliminating printing costs, mailing costs, and the need for someone to take the time to record the results (returned web surveys are likely already in the desired format)

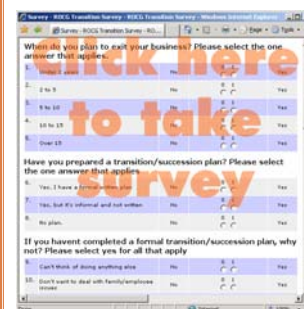
Response speed

Reaching a different demographic

Respondents can fill out the survey at their leisure

Interactive without drawbacks of having an interviewer

Eliminates time zone constraints



Disadvantages of Web/Email Surveys

Computer and E-mail Access

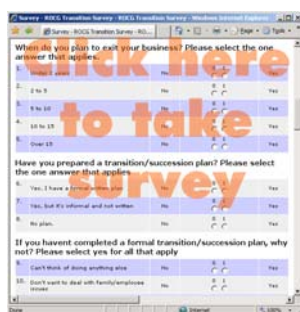
Lack of uniformity in the hardware/software used to complete the survey can affect the feel or look of the survey

Response rates – harder to gauge, but generally lower

Sample coverage and sample bias

Data editing/entry is still required (for email surveys only)

Hard to ensure intended respondent is the one completing the survey (for email surveys only)



E-mail vs. Web Surveys

E-mail

- Client-side – executed on a respondent's machine
- Technical limitations in regards to interactive features of the survey – reduces the number of e-mail surveys in use
- Transmission of information back and forth to the server isn't happening in real-time which makes prompting/seeking additional information difficult

Web

- Server Side – executed on the survey organization's web server
- Typically involves the respondent completing the survey while connected through a browser with the answers being transmitted to the server as each answer is submitted or next button is pressed
- Internet connection is "on"
- Most prevalent form of internet survey

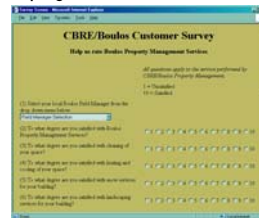
Web Survey Design Types

- Separate browser windows aka “pop-up surveys” vs. the main browser – also referred to as paging vs. scrolling surveys
- Single question (e.g. “question of the day” polls) or many questions
- Questions can be included in a single HTML form or distributed across many forms

Scrolling vs. Page Designs

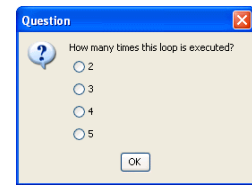
Scrolling

- Scroll Down to answer questions below
- Entire survey is on one page



Page

- Multiple pages to the survey
- Each question presented on a separate HTML form



Scrolling Surveys

Advantages

- Similar to a paper survey
- Respondents can readily determine survey length and see upcoming ?'s
- Can answer ?'s in the order they prefer
- Easy to program
- Quick to download
- Less interaction with the server so less technical difficulties

Disadvantages

- Typically, survey must be completed in one sitting
- All responses may be lost if respondent forgets to hit submit at the end of survey
- Can see all ?'s – may influence order of questions answered and answers themselves
- Having to scroll may increase missed items, especially on longer surveys

Use When: Survey is short, everyone needs to answer all questions, respondents missing ?'s isn't a concern, providing context for later ?'s is desirable, question completion order is of little concern, offering the web survey as an alternative to paper in a mixed-mode design

Paging Surveys

Advantages

- Minimal or no scrolling necessary
- Respondents can complete the survey in multiple sessions
- Skips and routing are automated
- Immediate feedback can be provided for missing data, etc.
- Feedback can be used to provide help
- More interactive

Disadvantages

- Greater interaction with the server is required
- Respondents may have trouble knowing where they are in the survey (context)
- Respondents have less control over ?/answer order
- Harder to code
- Raises concerns about confidentiality – once answers are submitted, they can't be undone even if the survey is abandoned

Use When: Survey is lengthy (allows respondent to complete survey in more than one session), survey contains skips, edits, etc., survey contains many graphs, it's desired for respondents to answer questions in sequence, survey contains key screening items

Discussion Question

- Given what we've learned about questionnaire construction and mail surveys, discuss some potential pitfalls in questionnaire design for Internet surveys. How are these similar/different than for mail surveys?
- How do you think response rates for E-mail/Internet Surveys compare to Mail Surveys?

Inconclusive Response Results

Author(s) and Year	E-Mail	Mail
Bachman et al. (1996)	52.5	65.6
Hertz et al. (1996)	68.5	96.2 ^a
Mehta and Sivadas (1995)	40.0 (without prenotice), 63.0 (with prenotice), 64.0 (with prenotice, an international survey)	64.0 (with prenotice), 45.0 (without prenotice), 83.0 (with prenotice)
Noh (1998)	31.4	
Opperman (1995)	48.8	
Parker (1992)	68.0	38.0
Parks and Floyd (1996)	33.3	
Tse (1998)	7.0	52.0
Tse et al. (1995)	6.0	27.0
Schaefer and Dillman (1998)	58.0	57.5
Schuldt and Totten (1994)	19.3	56.5
C. Smith (1997)	8.0 (without prenotice), 13.3 (with prenotice)	
Sproull (1986)	73.0	87.0 ^a
Walsh et al. (1992)	76.0	
Zelvietro (1998)	38.0	36.0

Cho and LaRose (1999)

Inconclusive Response Results

- Cobanolgu et al. (2001): Mail – 26.27%, Fax – 17%, Web – 44.21%.
- Leece et al. (2004), Survey of Surgeons: Web – 45%, Mail – 58%.
- Cook, Heath, and Thompson (2000)
 - Mean response rate over 49 studies and 68 surveys was 39.6%.
 - Significant predictors of response rate: Number of contacts (ceiling effect), personalized letter, salience, incentives (negative correlation), and education.

E-mail Vs. Web Based

Type	Response Rate	Browser Issues	Smart Resend
HTML Based E-mail	Typically Higher. Survey is viewable in email inbox. Higher responses when displayed opposed to having to click link for survey.	Some e-mail programs cannot respond to inline email surveys. Alternate link is included for those.	Automatically resend email to those that have not responded. Those that have are removed from list.
Web Based	Much lower than inline surveys.	Screen resolution, plug-ins	No resend. Not sent out first time.

Problems with Web Surveys

- Sample Quality – will a representative of a sample have the chance to respond? Internet users are usually younger and have higher education level. Web surveys provide high quality samples if the intended audience is those that are frequent internet users. If a target audience is wanted that is older non-white, then it may not be a well represented sample.
- Some technical problems are also prevalent while filling out an online survey
- Freezes and crashing – servers crashing and web browsers freezing up make finishing surveys difficult. For this reason, they should be relatively short or spread across several pages where the information is submitted at the end of each page. Slightly higher cost would allow for the continuation of a survey from any point.
- Error messages – If not properly programmed, some responses can cause error messages making the responses skewed and it hard to finish. Messages that notify you when a question is skipped is also important to be user friendly. Potentially take you to the question that was skipped when clicked on.

Problems cont.

- Double Entry – without the use of user id's and passwords, the responses can be skewed by double entry. A specific list of people should be developed for the survey. A general survey online has skewed responses with the number of times each person can fill out the survey online.
- Responses that are intentionally entered falsely will also skew responses.
- Sampling frame – since online surveys do not normally have a defined sampling frame, it is impossible to calculate a response rate
- Drop out rate – most of the people that begin surveys do not finish them. Only a very small percentage finish the survey.
- Cost – web surveys are cheap to create but can have a high cost if companies are having to provide monetary or coupons to entice users to complete a survey.

Web Survey Question Design

- Categorical questions – use questions that allow respondents to place themselves into exactly one category
- Double negative questions – type of question that asks for a level of agreement with a statement. Example: Teachers should not be required to supervise students during recess. If respondent disagrees, i.e. does not think teachers should not supervise students – in other words, they should supervise students.
- Double-barreled questions – type of question about more than one issue in a single question. May result in the inaccuracies in the responses being measured for the question.
- Leading questions – are questions designed to “lead” your response in a certain direction.

Skewed Scores

- Web survey users typically have private access to computers, hold more responsibility, and better paid.
- If a company offers surveys in an online and paper format, high level employees generally choose the online version with the low level employees choosing the paper format. Providing results.
- Opting out – response rates for web surveys can be as much as 80% lower than that of printed surveys.
- Why? Difficulty accessing the survey, inability to move forward and backward through questions, interruptions in completing survey make it tough to continue survey (would have to restart), confidentiality concerns.
- Sugarcoating – poorly designed web surveys produce favorable responses. Employees reluctant to complain because of fear of identity being released.

E-mail response rate influences

- Survey Length – one of the main reasons for non-response in business surveys
- Respondent Pre-notification – leads to increased response rates. Reminder emails also on average increased response by 25%.
- Design Issues
- Research Affiliation and Compensation – research cost of survey can get expensive to companies.
- Internet Users – Americans 50% Europeans 23% Asians 37%

Other Issues

- Speed benefits – mail surveys take on average 11.8 days to respond with email taking 7.6 days
- Cost of the survey itself only costs 5-20% that of a paper survey.
- E-mail surveys can also accommodate for some non response by knowing the number of undeliverable email addresses. Cannot count them as non-response if they were not delivered.

Innovations in Internet Surveys

- Currently used for:
 - Evaluations (classeval.ncsu.edu)
 - Market and scientific research
 - Online job applications
 - Polls
- Used to take tests and quizzes
- Creates tables, charts and graphs instantly
- Password features

Survey Creation Software

- Survey Creation Software is used for creating online surveys and web polls.
- Some Websites that use Survey Creation Software:
 - SurveyMonkey
 - SurveyGizmo
 - SurveySite
 - Zoomerang
 - Perseus

Survey Creation Software

- Consultation throughout survey research process, including:
 - ▣ method design
 - ▣ questionnaire creation
 - ▣ data collection and analysis
 - ▣ interpretation of result
 - ▣ export survey responses to statistical software packages such as SAS and SPSS

Survey Creation Software

- Access to tailored email lists and multisource recruiting for sampling
 - ▣ Allows researchers to target specific demographic groups within a population of interest
 - ▣ Tracking of respondents email
 - ▣ Email response notification

Survey Creation Software

- Help researchers collect data by advertising the survey on certain websites.
- Pop-up advertising to aid in recruiting participants.
- Some companies offer other types of features to aid with the survey research process.
 - ▣ For example, EZ Survey offers a free sample size calculator
 - ▣ unsubscribe respondents from an email list after they have completed a survey, which may help to reduce multiple responses from the same participant.

Mobile Surveys

- ▣ Merge computer technology with traditional survey methods.
- ▣ Telephone surveys with touch-tone responses.
- ▣ Online focus groups where individuals can view the same audio, video and text from different locations.
- ▣ Researchers can interact with individuals using web chats or via teleconference.

Mobile Surveys

- Uses wireless handheld devices such as Palm pilots, Smartphones, BlackBerry, etc.
- Data is sent to a server (similar to other online survey forms) where the information is posted to a database file.
- Advantages: Using a wireless device researchers can bring a survey to inaccessible populations:
 - ▣ those without personal computers.
 - ▣ Individuals in healthcare settings
 - ▣ rural environments
 - ▣ socioeconomic groups that do not have access to computers or the Internet.

Demo

- <http://classevals.ncsu.edu>

Issues in Privacy

- Discussion Questions
 1. What are some common threats to online privacy?
 2. How might these threats affect E-mail and Internet surveys?

The Appeal of Online Surveys

- Can address surveys to specific individuals
- Establishes asynchronous contacts with respondents on the move
- Can screen low incidence populations
- Can theoretically improve the quality and quantity of response
- Can extend contacts across national boundaries

... But Privacy Poses a Serious Challenge

- Three Types of Privacy Issues
 - ▣ Security Issues regarding web site encryption and data storage and security
 - ▣ Online Community Privacy Issues
 - ▣ Personal Privacy Issues

Security Issues

- Common Issues
 - ▣ Cookies
 - ▣ SPAM
- 7/10 respondents to an online survey about privacy said that they worry about privacy more on the Internet than through mail and telephone surveys (Cho & LaRose, 1999)
- 27% provide false information (Cho & LaRose, 1999)
- < 10% of Web Sites have stated policies protecting against private information (Federal Trade Commission, 1998)

Other Security Issues

- Security of data
- Anonymity
 - ▣ Personal Anonymity
 - ▣ Multiple Respondents

Online Community Privacy Issues

- Risk of privacy through trolling for email addresses
- E-mail addresses usually collected from online communities
 - ▣ Problem is exacerbated by “closed” communities such as the Facebook and the MySpace
- Banners placed in search engines, e-mail lists, and other Internet advertisements

Personal Privacy Issues

- Three Types of Personal Privacy Issues
 - Physical Privacy
 - Informational Privacy
 - Psychological Privacy

Physical Privacy

- Intrusion of an individual's space
- Because e-mail is personally addressed, it is considered more invasive than generic postal questionnaires
- Home computers can be considered private sanctuaries
- Internet fees
- E-mail accessible at work

Informational Privacy

- Control over the conditions, release, use, and retention of personal data
- Affects all medium and, ultimately, trust between the researcher and respondent
- E-mail can be copied and forwarded with ease
- False Identities: Problem for both researchers and respondents
- Private subscriber lists

Psychological Privacy

- The degree of control over personal information:
 - i.e. informed consent
- Personal choice and voluntary prudence

Addressing Privacy

- Anonymous form of response if trolling is used
- Provide Users with Personal PIN
- Use a personification e-mail to obtain consent
- Use E-Incentives
- Run Data Collection through Web Pages (i.e. Zoomerang)
- Gives respondents multiple response options (i.e. mail, telephone, and web)

Other Suggestions

- No Cookies
- Provide Disclosures
- Privacy Certifications
- Encryption
- Community Consent

Conclusions

- The Response Rate Issue
 - ▣ Research questions should drive methodology
 - ▣ Do your research before implementation
 - ▣ Follow best Practices for the medium
- Protect User Privacy Using Best Practices
- Uniqueness of Web and E-mail Surveys Can Be Positive or Negative
- Be Aware of New Innovations

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