

Interviews and Surveys

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Research Questions

- For every interview/survey, write your RQs
 - Make sure each question on your interview/survey addresses one of your RQs
 - Make sure each RQ is answered by one or more questions in your interview/survey
- Eg:
 - What are the most significant barriers kidney disease patients face in managing their disease?

Interviews

Kahn and Cannell, 1957, *Dynamics of Interviewing: Theory, Technique & Cases*

Interview Types

- Conversations with a purpose
- Open-ended, semi-structured, structured
 - Open-ended when probing someone about their first impressions (e.g. a new cell phone)
 - Semi-structured for asking about a prototype that is half-designed (e.g. icons for a PDA prototype)
 - Structured interviews for asking a specific set of questions where the goals of study are clearly understood (e.g. a new search engine feature)

Pros and Cons

- Open-ended
 - + Provide rich and unexpected findings
 - Can be led astray and miss valuable info
 - Difficult to analyze and replicate
- Semi-structured
 - + Preplanned questions and probes enable unknown but also systematic coverage
- Structured
 - + Replicable and consistent across interviewees
 - + Precise answers
 - May overlook key information as questions are set in advance

Example of Open-Ended Interview

- Functionality
 - What do you like most about the phone?
 - What do you like least?
 - How does it compare to your current phone?
- User groups
 - Who do you think it will appeal to most?
 - Would you buy one?
- Services/cost/plan
 - What do you think the plan of services offered?

Example of Semi-Structured

- Which websites do you visit most frequently?
<answer>
- Why? <answer mentions several but stressed that she prefers GreatestHits.com>
- And why do you like it? <silence, followed by answer>
- Tell me more about GreatestHits <answer>
- Anything else? <answer>
- Thanks. Are there any other reasons you haven't mentioned yet? ...

Example of Structured Interview

- How easy is it to find the text box on the page?
- Was it easy to find the go back button?
- Are the graphics pleasing to the eye?
- Are the links at the right level?
- Was there too much or too little information on the home page?

What not to ask/say/do

- Avoid compound questions:
 - How do you like your new cell phone compared to all the others you have owned?
 - How do you like this cell phone?
 - Have you owned other cell phones?
 - If so, how did you like your last phone?
 - How did your last phone compare to this phone?
 - Which did you like better?
 - And the one before that?

What not to ask/say/do

- Avoid leading questions that pre-empt
 - Do you think this style of interaction is cool?
 - What do you think of this style of interaction?
- Avoid judgments and inserting own views/preferences:
 - E.g. Really? No way! Oh, I prefer the other one.

What to do/not to do

- Let interviewees think and allow for silences
 - Do not get nervous and feel you have to keep talking to fill in the gaps
- Use probes to get more information on a topic
 - E.g. Is there anything else you want to say?
 - Can you say a bit more about X?
- Use props to enable more specific answers
 - E.g. a prototype, a real object, photos

How to Conduct an Interview

- Robson, 2002, *Real World Research*
 - An introduction (what the interview is about, do they mind being recorded, etc...)
 - Warm-up to break the ice (e.g. how far have you come from? Where are you from?)
 - Main session (ask most difficult/probing questions at end when relaxed and cued in)
 - Cool-off period (ask if there is anything else they'd like to know about the project)

How to be a good facilitator?

- Share focus/goal of study
- Be interested, friendly, and professional in what they are saying
- Probe deeper for information (Probe when you hear “yes,” “no,” and “I don’t know”)
- Be responsive/control the flow of the interview
- Make sure you can see what the participant is doing
- Learn from your participant
- Engender trust in participant (you are a CS/HCI/usability person - you will not go tell their boss...)
- Wrap up the session - verify what you summarize

Semi-Structured Interview with Probes

- Research question:
 - Not clear to what extent people are using camera phones to send pictures. How are they being used?
- How could you use a camera phone or other probe as part of the interview to elicit more specific information

Possible Approach to Semi-Structured Interview with Probes

- Suggest looking at five random images currently saved on the camera
- Questions to ask:
 - What does the image show?
 - Did you take it?
 - What was happening at the time?
 - Can you tell me more about this photo?
 - Have you shown it to anyone else?

Exercise: Semi-Structured Interview

- Work in project teams:
 - determine research question(s) for an interview with
 - 1. a health expert, and
 - 2. target population
 - come up with list of interview questions to answer your research question(s)

Questionnaires

How to Design and Use Them

Why use a questionnaire?

- Quick, easy and cheap method to administer to large numbers of people
- To collect people’s views, preferences, habits, opinions and demographics
- When privacy is important (e.g., asking people about their sex lives, attitudes towards abortion)

How do they differ from interviews?

- Respondents can answer in their own time, and not be put on the spot
- Less social pressure and embarrassment
- Can review and revise answers more easily
- Can choose not to answer questions
- Many design issues are the same, but more flexibility in structure and presentation
- Written text questions and design of interactive forms can impact responses

What to ask in a questionnaire

- Demographic information (gender, age)
- Previous experience (with computers, the web, domain of study)
- Views about X (where X is a website, piece of software, device, habit, etc...)
- Experience with X (enjoyable, frustrating,)
- Personal usage of X (e.g., frequency of playing video games, downloading music)
- Make sure the questions address your core research questions

How to ask questions

- Keep questions simple and avoid multi-faceted ones
- Use closed questions where possible and offer a range of answers to choose from
 - Less demanding for the respondent and you!
- Use yes/no and rating scales to force users to select a response

Example Q and As

- What do you like most about your phone
 - Cheap calls
 - Has many features
 - Looks cool
 - Easy to use
- Rate your phone

Very Cheap	1	2	3	4	5	Very Expensive
Cool looking	1	2	3	4	5	Not Cool
Easy to use	1	2	3	4	5	Difficult to use

What are wrong with these Qs?

1. How many times do you eat a day?
 - once a day
 - twice a day
 - three times a day
 - more than three times a day
3. What did you eat for breakfast today?

Bowl of cereal:	1	2	more
Bagel:	1	2	more

Fruit (please specify):

How to format answer types

- Age should be in ranges:
 - E.g.: 15-19, 20-24, 25-29, 30-34, 35 and over
- Experience should be in chunks
 - E.g.: daily, weekly, monthly, never
- Opinions should provide a number of choices along one line
 - strongly agree agree neutral disagree strongly disagree

Open-ended Questions

- Use when want to get personal information and “anything else” answers
- Make sure the space for the answer is big enough but not too big

What do you write about in your blogs?

Frequency Data

- If asking a question about frequency:
 - Rather than offer choices that are open to interpretation such as:
 1. Very often
 2. Often
 3. Sometimes
 4. Rarely
 5. Never
 - Better to quantify the choices, such as:
 1. Every day or more
 2. 2-6 times a week
 3. About once a week
 4. About once a month
 5. Never

Rating Scales

- Likert scales
 - Devised in 1932 by Renis Lickert to measure attitudes to topics/statements using descriptive terms. E.g.:
My job provides a lot of variety

Strongly	Disagree	Slightly	Undecided	Slightly	Agree	Strongly
Disagree		Disagree		Agree		Agree

 - Can also use numbers, but rating is more arbitrary:
I find this software easy to use
strongly disagree 1 2 3 4 5 6 7 strongly agree

Semantic Differential Scales

- Used less frequently than Lickert scales
- Explore bi-polar attitudes to something
- Measure intensity and directionality of a reaction.
E.g.:
Blogs Good _____ Bad
 3 2 1 0 1 2 3

Scales for Children

- Lickert scales can be adapted for children and different cultures:



Figure 2: Wong-Baker pain rating scale

Thurstone Rating Scale

- Ask a question multiple ways:
 - I had trouble finding what I wanted.
 - I liked how easy the software was.
 - The software has many convenient features.
 - The software was confusing.

Paper v.s. Online?

- Online questionnaires can be easier to administer and simpler to analyze
- Data can be directly put into a spreadsheet and analysis done automatically
- Many more people can be reached
- But, is there a catch?

The Online Questionnaire

- People are more revealing, honest and consistent in their answers to online questionnaires
 - Will say more about personal topics such as eating, drinking and amount of exercise
 - Students rate their instructors less favorably
 - Less social pressure to conform
- Response rate is **much** lower than for mail and paper-based questionnaires
 - E.g., student evaluations

Structuring of Information on Page v.s. Online

- Online questionnaires offer more opportunities for structuring information and in turn affecting how people read, navigate and respond
 - Use of headers and placement of questions
 - Use of drop down menus, radio buttons and jump-to options
- Questionnaires do not look the same in different browsers and on different monitors

Scrollable v.s. Interactive

- Displaying multiple questions on the screen v.s. one question per screen
 - Faster response rates
 - More consistent answers
 - More questions filled in

Physical Layout Matters!

- People with computer experience prefer left justified response boxes (paper-based questionnaires are usually placed on the right)

<p>What is your idea of a good night out?</p> <p><input type="radio"/> Visit to the theatre or opera</p> <p><input type="radio"/> Romantic dinner for two</p> <p><input checked="" type="radio"/> Karaoke at the local pub</p> <p><input type="radio"/> Drinks and then clubbing</p> <p><input type="radio"/> Watching a football game</p>	<p>What is your idea of a good night out?</p> <p><input type="radio"/> Visit to the theatre or opera</p> <p><input type="radio"/> Romantic dinner for two</p> <p><input checked="" type="radio"/> Karaoke at the local pub</p> <p><input type="radio"/> Drinks and then clubbing</p> <p><input type="radio"/> Watching a football game</p>
<p>Which of these would be your ideal holiday?</p> <p><input type="radio"/> Activity-based, e.g. skiing</p> <p><input type="radio"/> A luxury hotel in New York</p> <p><input checked="" type="radio"/> Exploring the Far East</p> <p><input type="radio"/> Lying on a beach in the sun</p> <p><input type="radio"/> A cottage in the country</p>	<p>Which of these would be your ideal holiday?</p> <p><input type="radio"/> Activity-based, e.g. skiing</p> <p><input type="radio"/> A luxury hotel in New York</p> <p><input type="radio"/> Exploring the Far East</p> <p><input type="radio"/> Lying on a beach in the sun</p> <p><input checked="" type="radio"/> A cottage in the country</p>

Physical Layout Matters!

- Plain web surveys give a better response rate than those with fancy designs containing colors, graphics and tables
- Radio entry v.s. check boxes?
 - – Radio buttons “erase” automatically when selecting another button
 - ☒ – Checkboxes require a click on the box to erase

Dos and Don'ts of Web-based Questionnaires (Dillman and Bowker 2000)

- Use a welcome screen that is motivating, that emphasizes the ease of responding, and that shows respondents how to move to the next page
- Have the first question fully visible on the first screen. The first question is not the place for filtering questions or drop-down boxes.
- Avoid lack of spacing, crowded horizontal design, and unconventional layout. Brightness, fonts and spacing can greatly assist respondents in navigating questionnaires.
- Use conventional vertical layout with numbered questions, and distinct space between questions and responses.

Continued

- Provide instructions for the necessary computer actions (i.e., erasing radio buttons, drop-down menus, and clearing open-ended questions)
- Use a scrolling design that allows respondents to see all questions unless future questions are changed based on answers
- Use symbols or words to give respondents some idea of their progress in the survey
- Web survey respondents, like paper respondents, need some indication of how near they are to completion

Web Surveys

- Lots of free tools for designing your own online questionnaires

Experience Sampling Method

- To get answers to questions “in the moment”, want to ask questions throughout the day
- Experience sampling usually uses technology to ask questions
 - At random time intervals
 - Triggered by specific event

ESM guidelines

- You are interrupting their normal task, so:
 - Should take 15-30 seconds to answer all the questions in a session
 - No free-form answers... just radio buttons and check boxes
 - Could request voice recording if necessary (harder to analyze)

Team Assignment

- Design the demographic section of a questionnaire for your target population
- Possible items of interest:
 - Basic: Age, gender, education, income
 - Technology: experience w/, years of ownership of, internet access
 - Health: types of health issues, how long they've had them, current treatment, etc...