Other direct methods: Focus groups, Ethnography, Diary studies, Eye tracking

CS798H – 2023-24 (Sem-II)

Focus groups

- Interviews with a group, instead of an individual.
- Useful when:
  - Discussions might influence behaviours / attitudes / consensus
  - Marginalized groups, and them being in a group lets them speak up
  - You want participants to speak for / consider a wider group (lower biases of social likeability, not want to speak up about something for themselves)
- Challenges:
  - One or two people derailing everything
  - Some people might say less in groups
  - Can get out of hand and so hard to moderate
- [More slides also available in Week 2 with interviews.]

Planning & conducting focus groups

- How many participants in each group (5-10)

- Nature of group
  - Homogenous group: Lesser diversity, perhaps less discomfort speaking up
  - Heterogenous group: Greater diversity, someone marginalized might shy

- Number of groups?
  - One per bucket (for homogenous), 1-3 for heterogenous groups.
  - Slicing and dicing for groups (diverse children, then diverse adults, etc.)

- Focus groups never on their own!
  - Triangulate with other methods.

Ethnography

- Originally, study of cultures

- What do ethnographers do when they study a new culture?
  - Observe what happens, and when they find something interesting, they interview to seek further understanding

- Ethnography in HCI is used when you have absolutely no idea about something that you are investigating
  - You go into the field, and use a combination of observations and interviews

- Helps gain an exploratory breadth of phenomena / contexts
  - Not an in-depth method
  - Use ethnography to generate questions; answer them with other methods

Diary studies

- Observations / contextual inquiry → conducted for one instance
- What if we want to keep track of a long period of time?
  - Longitudinal studies – do observations periodically over time
  - Very valuable (removes learning effect, etc.)
  - But very costly !
- Alternatively, use diary studies
  - Participants keep a log of events as required to answer research questions.
  - E.g., To understand challenges of online learning.

When conducting diary studies…

- Frequency of diary entries?
  - Every day? Every week? Twice a week?
- Open-ended / prompted with questions
  - Same question every time, a set of questions in rotation?
  - E.g., You could do 3 entries per week, where one time you could ask about online exams/quizzes, one time about group work and once about learning. Alternatively, you could do all 3, all 3 times.
- People forget to log – remind them!
- How long? Too short – not enough entries / time. Too long – high dropout rates among participants.

Eye tracking

- Useful for understanding users' visual attention
  - People might see things, think alouds tell us what they pay attention
  - But not what all they looked at, and perhaps ruled out (or even noticed in the periphery)
  - Also useful, when you want to do it in a non-invasive manner (as with think-alouds)
- How they work
  - You start calibrating the angle, speed, direction, position of pupils, position of neck, etc for pre-determined task (e.g., follow movement of a ball on screen)
  - Compute what position of a person is looking at later, based on above
  - Use other tools to map what object is at a position in screen.

What can eye tracking tell us?

- Coordinates of focal vision
- Coordinates / areas in peripheral vision
- Direction of vision (esp. looking away from screen / above for thinking or doing other things, such as writing on paper)
- Blinking
- Pupil constriction & dilation (diameter of pupil)

Readings (Chapters from Lazar)

- Diaries – Lazar Chapter 6; pay attention to 6.4-6.7, skim the rest.
- Contextual inquiry – Lazar Section 8.5.2 (read the box on pg 201-202!)
- Focus groups – Lazar Chapter 8.6
- Ethnography – Lazar Chapter 9, focus on 9.4 (ignore the analysis and theorizing part, we'll do that later)
- Eye tracking – Lazar 13.2

[Skim through or skip what you know, pay attention to the rest!]