WS17 - User Research Methods - Lecture Outline

0. course admin
1. history: three waves of hci
    - first wave of HCI: human factors/engineering, ergonomics, optimise human-machine fit, maximise efficiency
    - second wave of HCI: cognitive revolution, information processing, mostly office-settings, behavioural science
    - third wave of HCI: situated perspectives, everything everywhere, creating opportunities, engaging, experiencing, connecting
2. paradigms
    - (post-)positivism
    - critical theory/transformative
    - constructivism/interpretivism
3. qualitative methods intro
    - ethnography
    - anthropology
    - ethnography for design
    - ethnographic methods
    - why / what can it contribute
    - types of ethnography
    - relevance to academic fields and industry
    - challenges
    - responsibilities
    - terminology
4. observations
    - when are they useful?
    - how to do them?
    - how to collect data?
    - into the field
    - deciding focus and approach
    - tools
    - things to pay attention to
    - challenges
    - reflective practice
    - data capture methods (pen & paper, digital notes, photos, audio, video, collected artefacts, sensor-based)
    - debriefing

    - bias
    - reporting strategies
    - memos
5. interviews
    - when are they useful? how to do them? what is difficult? how to collect data?
    - how useful?
    - types of interviews
    - unstructured interviews
    - semi-structured interviews
    - setting up
    - asking questions
    - questions: open vs closed, neutral vs oppinonated, simple vs complicated
    - best friend questions
    - mindfullness
    - closing
    - consent (forms)
6. group techniques
    - focus groups
    - fishbowl
    - barcamp
    - world cafe
    - breakout sessions
    - open space
7. other methods
    - online research, digital ethnography, social networks
    - experience sampling and diaries
    - probes - technology, cultural
    - auto-ethnography
    - sensor-based methods
8. ethics
    - virtue ethics
    - deontology
    - consequentialism
    - informed consent and consent forms
    - ethics boards
    - online research
9. analysis
    - preparation, e.g. transcribing
    - kinds of data
    - induction vs deduction
    - affinity mapping

    - grounded theory and coding
    - thematic analysis
    - coding tools
10. role of theory
    - why theories
    - various theories (activity theory, distributed cognition, ethnomethodology, phenomenology, embodied cognition, symbolic interactionism, critical theory, actor network theory)
11. surveys
    - quantitative or qualitative
    - common structure
    - types of questions
    - tipps for good questions
    - population sampling methods
    - analysis
    - tools
12. lab studies
    - where and when?
    - types of research / lab studies
    - usability testing
13. quantitative analysis
    - types of research/questions we can ask
    - descriptive statistics
    - relational questions
    - causal questions
    - proving causality
    - dependent and independent variables
    - experiment hypotheses and goals
    - participants
    - within- and between-subject design
    - experiment design
    - interpreting results
    - significance and effect sizes
14. towards design
    - why user research?
    - how to present results
    - academic papers
    - personas
    - storyboards
    - task descriptions and scenarios
    - hierarchical task analysis

- contextual design
- types of models (flow, sequence, physical, cultural, artefact)
- visioning
- storyboarding