Study Design Document (DAT610 / DIT096)

Purpose of Study (Research Questions / Hypotheses)

The purpose of the study is ...

- RQ1 ...
- RQ2 ...
- H1 ...
- H2 ...

Participant Demographics

Participants should have the following criteria:

- ...
- ...

Participants should not have the following criteria:

- ...

Informed Consent

Plan a "contract" with the participants. Participants should know what the project is about, any risks/benefits for participation, methods used, who *you* are (HCI course Chalmers/GU; research principal, your names), that it is voluntary, that they can cancel anytime etc. They can sign a physical paper (e.g. before an interview) or tick a box (online questionnaire).

Compensation Plan

- [ ] Financial; amount of money (?? SEK) per participant for ?? minutes
- [ ] Other; chocolate, snacks, vouchers
- [ ] **No compensation**

Methodology

Study Design

- [ ] Qualitative
- [ ] Quantitative
- [ ] Mixed

Methods (read more in the book)

- [ ] Controlled observation
- [ ] Indirect observation
- [ ] Evaluation
- [ ] Interview
- [ ] Workshop
- [ ] Scenario testing
- [ ] ...

Data collection

- [ ] Audio
- [ ] Photos
- [ ] Video
- [ ] Text (participants)
- [ ] Notes (researchers)
- [ ] System logs
- [ ] Questionnaires; open / closed questions, scales (Likert, etc)
- [ ] ...

Experiment design

- [ ] Within-subject (repeated measures)
- [ ] Between-subject
- [ ] Correlational

Estimated number of participants

n= ??

Conditions

- [Control] ...
- ...
- ...

Variables

Independent Variable(s)

- ...

Dependent Variables

- ...
- ...

Material & Apparatus

Equipment

- (devices) ...

Questionnaires

- [ ] (existing, *standardised instruments, e.g. SUS, UES, NASA-TLX, etc*) ...
- [ ] (custom) ...

Task(s)

What do the participants have to do? ...

Protocol (structure and timeline)

Remember that you want to collect as much data as possible, but there are limits to how long a user study session can last -- both in terms of attracting participants, and also having them not lose focus. Also, if you conduct these in real-time (instead of e.g. asynchronous online), there are only so many sessions you can reasonably go though in a day.

Pre-trial

- (Ethical approval ?)
- Consent form
- Demographics
- (Participant grouping and possible balancing based on demographics?)

Trial

- read instructions (2 mins)
- familiarise with the prototype (5 mins)
- task #1 (10 mins)
- fill-in questionnaires #1 (2 mins)
- task #2 (10 mins)
- ...
- semi-structured interview (5 mins)

Post-trial

- (Compensation ?)
- (Debriefing ?)

Analysis

Which of the following will you use? Be specific as to which collected data with which test(s). Try to connect the results / outcomes of these with specific Research Questions or Hypotheses!

- qualitative data (interviews, observations, etc)
    - thematic analysis; report findings and insights, and do synthesis, then suggest potential improvements for the prototype
- quantitative data (control condition vs your prototype); compare to see if there is any difference (and if there is, the effect size)
    - t-test
    - ANOVA
    - etc

Roles and Responsibilities

More than one group member can contribute to each project role, but someone should clearly have the main responsibility. The roles should make sense in the context of the specific project. The distribution cannot be exactly equal, but it should not be very unbalanced e.g. one person just responsible for writing up the report!

- xxx -- preparation of documents and materials, ...
- xxx -- recruitment of participants, ...
- xxx -- technical support, prototype testing, ...
- xxx -- study conduction, ...
- xxx -- data analysis, ...
- etc