# Week 6:
# Create a Questionnaire

Nicole Meng-Schneider

# How to submit CW2

**IMPORTANT UPDATE:**

To submit your assignments, please submit each report separately. One in submission box "Report 1" and the other one in submission box "Report 2".

It is **crucial** that you do not submit twice for the same submission box. Doing so will **override** the previous submission and make it impossible for us to mark it. So please take extra care.

# Recap Study Variables

# Study Variables

- **Independent Variables**
    - independent of the outcome
    - directly manipulated by the researcher (e.g. the interface you are showing, set of scenarios etc.)
    - pre-existing feature of participant or study environment (e.g. prior education, experiences with tech, browser brand)

- **Dependent Variables**
    - Outcome Variable
    - The variable that is manipulated by the test (e.g. Answers to the questions, usability ratings, described confidence, )

- **Controlled Variable (Fixed Aspect)**
    - An aspect of the study that is the same for all participants (survey structure, question wording, order of tasks)

# Activity



Link to tutorial

## Study Variables

Get in groups (3 or 4) and open the Study Variables Tutorial.

1. Go through as many cases as you can.
2. Assign the variables and discuss why you chose those. (10min)
3. Share with the class (5min)

# Activity



Link to tutorial

# Case 1 – Answers

**Dependent Variable(s):**
- Time cat spends looking at the screen, how many times they swat at the screen.

**Independent Variable(s):**
- Cat demographics (gender, how energetic, if it is an indoor or outdoor cat or both).
- Also 1-cat or 2-cat household.

**Fixed Aspect(s):**
- 12 inch tablet, study happens in the cat's home.

**External Validity:**
- The study took place in **people's homes**. Cats might behave differently outdoors or at the vet.
- Some of the studies were in **2-cat homes**. Measurements might be impacted, even if only one cat interacted.
- **Environment issues** are not being measured or controlled and might impact user experience.
- The study uses **snowball sampling.** Participants might be from a similar group with similar traits.

# Activity



Link to tutorial

# Case 2 – Answers

**Dependent Variable(s):**
- Frequency of app use, enjoyment, what initial usage was like.

**Independent Variable(s):**
- Demographics (age, gender, occupation), past experiences before using the new app (sorta).

**Fixed Aspect(s):**
- The app itself, 1 month of usage, Source of participants, they all use this forum.

**External Validity:**
Impacts on external validity include:
- **Self-selection**, participants decided if they wanted to respond to the ad.
- **Sampling Method**: Researcher wants to study new SnapChat users, but did advertisements across a SnapChat online forum, so quite likely that they are not getting new users.
- Self-report (**memory**) of interaction frequency - the researcher built the app but decided to rely on self-report rather than log data.

# Case 3 - Answers

**Dependent Variable(s):**
- UAR forms, prioritization of the issues.

**Independent Variable(s):**
- Experts, screens shown in the walkthrough

**Fixed Aspect(s):**
- The "correct" sequence of screens. Also the focus on train expenses. Experts are not looking at the whole UI, instead they are only looking at the screens that Zoe is providing them, so these are a fixed aspect.

- The 4 cognitive walkthrough questions - these are fixed, but probably didn't need to be mentioned since they are part of the study methodology being used.

**External Validity:**
- Experts instead of real users: While are knowledgeable and able to spot real issues, they still think differently than real users.
- Correct sequence of steps: Asking developers might lead to a different answer than real users of finance department. There might also me different ways to complete the task, but only one is examined.

## Activity

Link to tutorial

# How to design a survey?

# **Study Design Process**

1. Define Research Questions/ Usability Goals
2. Select a study methodology
3. Identify the data to collect
4. Design the study structure
5. Run Study and Analyse

# Activity Brief

**Research Question:**

To what extent does the redesigned learn/ opencourse interface improve student experiences?

**Methodology:**

Online Survey

**Participants:**

UoE students

**Survey Structure:**

1. Screening
2. Main Body
3. Demographics

## Design a Questionnaire

Get in groups (3 or 4).

1. **Assign Study Variables: (10 min)**
   a. What data are you collecting?

2. **Discuss Screening: (5 min)**
   a. What are attributes can you use in screening?
   b. How can we recruit participants to help us get more of the right participants?

3. **Brainstorm Main Body Questions: (15 min)**
   a. What questions are you going to ask (max 5)?
   b. Draw your questions from your study variables and RQ.

4. **Post your work** under the Piazza post and in your group, discuss other groups' answers. (5 min)

Questionnaire Slides

# Any questions?

# Week 6:
# User Studies

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