






Usability Testing Preparation

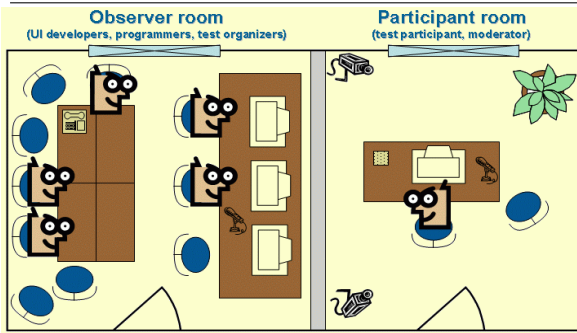
Jakub Franc

Lecture Outline




- Theory + best practices*
- Setting the goals and strategy
- Involving stakeholders
- Time plan
- Representativeness of research sample
- Recruiting
- Legal issues / ethics




How Does It Look Like?



Credit: Zdeněk Mikovec




Premeditation – High Level Preparation

What Outcomes You Can Expect




Keep that in mind when setting the goals and expectations with your team.

- Direct identification of usability problems
- Provides information about real usage of the product
- Chance to see real user performing tasks in her/his own way

What Are the Limitations? (Being Honest)

- Does not provide solutions
- Does not answer many market research questions
- Does not explore. You learn only about a single design.
- Is it the most suitable method for you?
- Do you have resources for it?
- Are you able to simulate critical facets of your users' context?

Research Properties - Validity

- Validity – does it measure, what it is supposed to measure?
- Ecological validity – are the results applicable in subjects' own environment?



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Research Properties - Reliability

- Reliability – accuracy of the measurement
- Standardization – equivalent approach in task submission, data collection and interpretation
 - > Does the measurement remain consistent over repeated measurements?
 - > Across different researchers?
- Errors
 - > Systematic
 - > Random



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Study preparation



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Involving Stakeholders

- The acceptance of usability study results is closely associated with involvement of stakeholders in the testing process
- Evangelize
- Involve
- Integrate
- Communicate



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Getting Stakeholders Buy-in

- Identify the important stakeholders
- Communicate the value of usability testing in their terms
 - > Understand their challenges
 - > Have success stories ready (ROI):
http://www.upassoc.org/usability_resources/usability_in_the_real_world/roi_of_usability.html
- Involve them in setting up goals and target audience
- Invite them for observation



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Time Plan

- t – 3 weeks: identify target audience, prepare screener, let the stakeholders review it
- t – 2 weeks: start recruitment, prepare tasks
- t - 1 week: have your tasks ready, prepare the environment, send invitation to stakeholders
- t – 2 days: run pilot test, remind stakeholders
- t: run the test (1-4 days), take care of stakeholders
- t + 1 day: do something else
- t + 2 days: watch recordings, discuss with stakeholders
- t + 2 weeks: deliver report and video highlights



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Choosing Features to Test

- Get input from the team
- Evaluate in terms of
 - > Importance (frequency of use, critical to success)
 - > Doubts (novelty, redesign, negative feedback)
- Limit the number of tested features/tasks from 4 to 7



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Estimate Task Time

- It takes 5 – 10 times longer to complete the task for a participant than for you
- Sessions usually last 45 – 90 minutes



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Whom Should You Test ?



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Research Sample

- Population – sampling frame - sampling – sample
- Issue of data generalization
- 2 parameters
 - > Size (diversity of users)
 - > Representativeness (validity)



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How to Ensure Representativeness? Sampling strategies

- Random
 - > Simple (lot)
 - > Systematic
- Non-random
 - > Quota
 - > Snow ball
 - > Self-selection
- Screening process - screener



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Criteria Defining Your Participants

- Reflect target market segment definitions
 - > quite often missing

Examples:

- Demographics
- Socio-economic position
- Consumer behavior
- Usage of the product



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Screener Development

- Questionnaire covering your participants' profile
- Be very precise when outsourcing
- Avoid leading questions
- Open-ended questions tell you a lot about the candidate (communication skills, level of expertise)
- Set up targets for every question
- Do not ask questions that do not serve the screening process

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Screener Questionnaire - Example

- Target: Experienced in Java
 - > For how many years have you been developing in Java?
(Target: >3 years)
 - > Do you currently develop in Java?
(Target: Yes)
- Target: User of NetBeans / other IDEs
 - > What IDE do you primarily use?
 - > Target: 4 NetBeans users / 2 Eclipse users / 2 IDEA users

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Sampling Bias

- Difference in distribution of surveyed variables between population and sample
- Certain subgroups or views overrepresented or shortchanged
- Non-responder bias
 - > Timing bias
 - > Invitation bias
 - > Presentation bias
 - > Expectation bias

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Qualitative vs. Quantitative Approach

Choose the approach reflecting your goals and resources

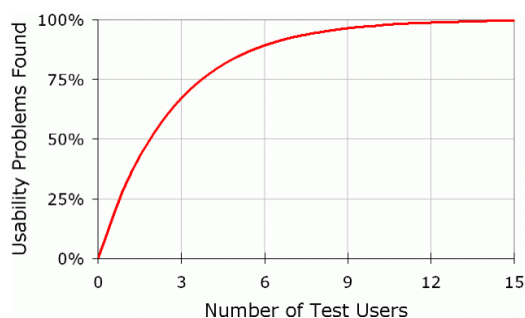
- Qualitative
 - > 6 – 8 participants
 - > Less time consuming, reveals 90% of problems
 - > Common in commercial environment
 - > Getting insight in the usability issues
- Quantitative
 - > 20+ participants
 - > Statistical evaluation - metrics
 - > Government contracts, universities
 - > Tracking trends, comparison, benchmarking

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How Many Participants?



Credit: useit.co

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Dealing with Candidates / Participants

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Initial Invitation

- Find the right target medium (school alias, classifieds, customers database)
- Briefly describe the purpose of testing (avoid technical terms, use common language)
- Do not reveal name of the product
- Inform about testing time / ask for time preference
- Attach screener and explain its purpose

Assure candidates that there are no wrong answers



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Confirmation

- Confirm the date, provide directions
- Leave a contact reachable in the time of study
- Ask to come in time
- Do not forget to notice those who did not qualify
- If you need to minimize number of “no show-ups”, double check via phone the day before



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Incentives

- Motivating force
 - > Avoiding self-selection
- Monetary compensation is highly recommended
- Reflecting socio-economic situation of the participants
- 300 – 1000 Kc / per session



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Ethical issues in Usability Data Collection

- Briefing
- Contract
- Debriefing
- Principles:
 - > Non-maleficency (no harm done to the participant)
 - > Beneficence (participants' benefit)
 - > Personal data protection / privacy



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Initial Instructions

- Explain the purpose of testing
- Inform participants about recording of the study
- “Think aloud”
- We test the product, not the participant
- Describe test process
- Eventually sign the legal contract / let the participant review it



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Legal Contract

- Do not try it at home / use professionals
- Voluntary
- Describes how test records and personal data will be processed and stored
- Defines an incentive
- Serves also as a document for your accountants



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Run Pilot Test

- Have your task and environment ready
- Use internal participants
- Check up
 - > Technical setup
 - > Tasks
 - > Time needed for completing the task
- Run it at least 2 days before the testing



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Wanna learn more?

- Kuniavsky, M: Observing the User Experience
- Disman, M.: Jak se vyrábí sociologická znalost

- Practice, practice and practice



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DEPARTMENT OF COMPUTER GRAPHICS AND INTERACTION

**Thank you for your
attention
Q&A**

Jakub Franc