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Sketching with Objects – A Toolkit to Extend the User Centered Design Process

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Overview

- Motivation
- Evaluation
- Project overview
- User studies
- Conclusion and Outlook
Motivation

- User Centered Design: different tools can help in all stages

**Fig. 1** Appropriate tools for each phase of the User-Centered Design Process with the right fidelity [1]

How can intra-team communication be made easier?

How can development of prototypes be made quicker and simpler?
Evaluation

Use of toolkit can only be measured in „soft“ data

Svanaes bases evaluation model on theories in social studies, Trochim lists alternative criteria for qualitative research ([3],[4])

→ Validity criteria:
• Confirmability: How objective are results?
• Dependability: Be aware of changing context
• Credibility: How believable are results?
• Transferability: Can results be transferred?
Evaluation

Data triangulation: data viewed from three perspectives:

Fig. 2 Data triangulation
Project overview

Basic Toolkit Version

Own ideas/mind map

Toolkit 1.1

Pre-Study

Toolkit 1.2

Brainstorming

Prototypes

Studies at the museum

Toolkit (Final Version)
Brainstorming session

Pre-Study
→ First alterations to the toolkit

Study
• Briefing
• Scenario
• Brainstorming
• Prototype development
• Questionnaire
Brainstorming Findings

- saves time
- serves as reminder of elements/functions
- applicable for many scenarios and situations
- enhance creativity
- restriction in creativity because design is preset

How useful would you rate the toolkit in general?
Brainstorming - Findings

How do you rate the categorization in regard of clearness?

How do you rate the categorization in regard of conclusiveness?
Brainstorming - Results
Studies at the museum

at the “Pinakothek der Moderne”

Two studies with participants from brainstorming

First study without prototypes or props, second study with prototypes

Design
  Briefing
  Interviews
  Questionnaire

Assumption: Ideas can be communicated faster and easier with tools
  → get qualitative feedback
First study at the museum

- Two teams
- Questionnaire:
  General Questions (visiting the museum)
  Functions and Appearance of a new guide
  Demographics

Thursday afternoon, 2 p.m.-4 p.m.
10 interviews (about eight minutes on average)
First study – problems

- People thought of audio guide
- Description of certain functions was difficult
- Unintended use of help
Second study

• Same two teams
• Same questionnaire
• Using prototypes and props from the toolkit
• A week after first study
  7 interviews (9 minutes on average)
Studies at the museum – Impressions
Studies at the museum – Findings

Assumptions based on questionnaire after first study

- use of prototypes would arouse interest
- simplify communication of ideas

Questionnaire findings – second study

- Participants found that answers came quicker
- Visitors could imagine better what interviewers meant by their ideas
Conclusion

• Keep certain level of abstraction
• More constraints for brainstorming → no digression
• Distinction between elements merely regarding appearance and other functional features
• Toolkit useful → Further evaluation necessary

Outlook

• surveys with most essential parts from toolkit (size etc.)
• studies with unexperienced end users
Thank you for your attention.

Any Questions?
Literature


