A Short Introduction to Usability in Online Surveys

Lars Kaczmirek

Outline

- About Usability
- Examples for Online Surveys
- Measuring Usability

Usability Professionals' Association
http://www.upassoc.org/usability_resources/about_usability/

- **Usability** is the degree to which something - software, hardware or anything else - is easy to use and a good fit for the people who use it.
- It is a **quality** or characteristic of a product.
- It is whether a product is **efficient**, **effective** and **satisfying** for those who use it.
- It is the name for a group of **techniques** developed by usability professionals to help create usable products.
- And, it is a shorthand term for a process or approach to creating those products, also called **user-centered design.**

ISO 9241-11 (1998) Guidance on Usability

- International Organization for Standardization
- "The extent to which a product can be used by specified users to achieve specified goals with effectiveness, efficiency and satisfaction in a specified context of use."

- Accuracy / Effectiveness
- Efficiency (time aspect)
- Satisfaction

Dialogue principles in the ISO 9241-10

1. **suitability for the task** (the dialogue should be suitable for the user's task and skill level)
2. **self-descriptiveness** (the dialogue should make it clear what the user should do next)
3. **controllability** (the user should be able to control the pace and sequence of the interaction)
4. **conformity with user expectations** (it should be consistent)
5. **error tolerance** (the dialogue should be forgiving)
6. **suitability for individualisation** (the dialogue should be able to be customised to suit the user)
7. **suitability for learning** (the dialogue should support learning)

1 suitability for the task

- Example ranking task

- Rank 18 values

- A first cumbersome attempt:
  Entering numbers

- After task analysis and
  user testing: a new interface was developed

2 self-descriptiveness

- Entering a date, aiming at numbers

- Possible ways to get to these results
    - Use of Gestalt Theory and experiments
    - Task Analysis (process flow)
    - Eyetracking

MM YYYY

07   1974   Month Year   ☐ ☐

3 controllability

- Allow respondents to go back and edit their answers.
- With forms, respondents should be able to enter data in the sequence they prefer.

4 conformity with user expectations

1. As a definition in the internet radio buttons are for single answers only and check boxes for multiple answers. Breaking the expectations can lead to confusion about how respondents think the answers should look like.

2. As a panel member you might expect a typical design and progress indicators.

5 error tolerance

1. When data can be entered in different formats, the survey system should be forgiving and allow for common formats.
   - Example telephone numbers
   - +49 621 1246 206
   - 0049 (0) 621 1246-206
   - 06211246206
   - Fewer entry errors with the first two and easier to understand by humans.

2. Save and continue feature
3. Soft checks instead of hard edit messages

6 suitability for individualisation

- Filters, branching, adaptive surveys
- Language, localization (e.g. time format)

7 suitability for learning

- In online surveys participants need to understand within seconds what they are expected to do.

- Complex interfaces are not for one time users.

Typical Usability Methods

- Testing

- Experiments

- Expert Review (e.g. Heuristic Evaluation, Cognitive Walkthrough)

- Paper Mockups, Prototyping

- In Survey Methodology also
  - Cognitive pretesting
  - Probing in online surveys

Measures

- Rate of task completion (-> effectiveness)
- Time on task (-> efficiency)
- Satisfaction ratings (-> satisfaction)

- Attentiontracking (e.g. eyetracking)
- Mouse movements
- Keystrokes
- Window events
- video

- In the case of online surveys also
    - Switches, misses
    - Non response
    - Data quality, measurement error, scaling
    - qualitative data: pretesting, cognitive interviews

Thank you

Lars Kaczmirek

kaczmirek@zuma-mannheim.de

This presentation is available at
http://kaczmirek.de/downloads/