



Customer Experience Specialists

## Usability Evaluation – comparing techniques

Mike Atyeo

# Common Usability Evaluation techniques

- Inquiry – focus on user data
  - Interviews or focus groups
  - Surveys
  - Monitoring help lines
  - Observation (job-shadowing)
- Inspection – focus on user interface
  - Expert heuristic evaluation
  - Cognitive walk-through
  - Automated testing – e.g. Bobby
- Test – focus on task performance
  - Usability testing – in a lab, in the field, online





# Focus groups

## ➤ Description

- A small group of people (usually 6 – 8) are engaged in a facilitated discussion of a product and its usage. Scenarios or demonstrations may be used and quantitative data may be collected as well as qualitative.

## ➤ Characteristics

- Good for early concept exploration - collecting rich information on preferences, opinion, attitudes, stories, and “wish lists”
- Does not involve users interacting with software
- Can produce a large quantity of design choices and features
- Discussion will be influenced by group dynamics (for good or bad)
- Can be difficult to produce data focused on design improvements
- Can be done as an electronic meeting, which allows for anonymity and reduces the effect of group dynamics
- Records what users *say they would do*, not what they would *actually do*



# Heuristic evaluation

## ➤ Description

- A Human Factors (HCI, Usability) experts carry out a critique of the product or service, by inspecting the product or a prototype

## ➤ Characteristics

- Can be a cost-effective way of identifying key issues
- Can be cost-effective for prioritizing subsequent usability testing, and ensuring more obvious issues are removed from the testing
- May not be able to identify some issues specific to user, experience, context, or technical issues
- Uses experts, no users
- No scenarios, metrics or tasks are required
- May cover entire problem space, although evaluation may be prioritized by users or tasks
- May be difficult to standardize or categorize rationale for design changes
- May be seen as 'opinion'



# Usability testing

## ➤ Description

- Users – usually one or two at a time– carry out specific tasks using a prototype or actual user interface. Users are asked to “think aloud” while working, and the facilitator may ask questions or provide a questionnaire. Information may be recorded about paths taken, user comments, etc. Measures often include time on task, error rates, use of ‘help’ material or requests for assistance. User reactions and the computer screen may be recorded on video.

## ➤ Characteristics

- Can be a cost-effective way of comparing options at early design stage, or identifying key issues as design proceeds
- Can take into account user experience, but not full context of use
- May not take into account technical issues – e.g. network delays
- Evaluation is usually prioritized by users or tasks, so may not cover issues in lower priority areas
- Provides design rationale based on user behaviour and cognition
- Seeing real users struggle can be a very powerful experience!

# Comparing 3 usability evaluation techniques

	<b>Inquiry - Focus Groups</b>	<b>Inspection - Heuristic evaluation</b>	<b>Test - Usability Testing</b>
<b>Typical method</b>	Moderated group discussion with 6 - 9 participants	Usability expert inspects user interface	Individual or paired testing of 6 - 12 participants
<b>What do you get?</b>	Users' attitudes, beliefs and desires and reactions to ideas or prototypes	Identification of issues based on experience and established principles	Observation of actual user behaviour and reactions
<b>What do you not get?</b>	Problems users actually have working with the product or service	Issues relating to specific types of users and contexts	Issues specific to the context and long-term learning and use
<b>When / why should you use it?</b>	From early concept to early prototype To get reactions to proposed product value and functionality	From early prototype to final product To quickly identify usability issues and design options	From early prototypes to final product To set targets and assess progress



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## Contacts

Phone (613) 271-3001

Email [info@neoinsight.com](mailto:info@neoinsight.com)

Web [www.neoinsight.com](http://www.neoinsight.com)

Mail Suite 374  
300 Earl Grey Drive  
Ottawa, Ontario  
Canada K2T 1C1

## Senior Partners

Mike Atyeo

**Strategic design**

(613) 599-7470

[mike@neoinsight.com](mailto:mike@neoinsight.com)

Gord Hopkins

**Customer experience specialist**

(613) 836-0660

[gord@neoinsight.com](mailto:gord@neoinsight.com)

Scott Smith

**Competitive strategy**

(613) 863-5397

[scott@neoinsight.com](mailto:scott@neoinsight.com)