Introducing evaluation

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The aims

- Discuss how developers cope with real-world constraints.

- Explain the concepts and terms used to discuss evaluation.

- Examine how different techniques are used at different stages of development.

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Two main types of evaluation

- **Formative evaluation** is done at different stages of development to check that the product meets users' needs.

- **Summative evaluation** assesses the quality of a finished product.

Our focus is on formative evaluation

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What to evaluate

Iterative design & evaluation is a continuous process that examines:

- Early ideas for conceptual model
- Early prototypes of the new system
- Later, more complete prototypes

Designers need to check that they understand users' requirements.

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Bruce Tognazzini tells you why you need to evaluate

"Iterative design, with its repeating cycle of design and testing, is the only validated methodology in existence that will consistently produce successful results. If you don't have user-testing as an integral part of your design process you are going to throw buckets of money down the drain."

See AskTog.com for topical discussion about design and evaluation.

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When to evaluate

- Throughout design
- From the first descriptions, sketches etc. of users needs through to the final product
- Design proceeds through iterative cycles of 'design-test-redesign'

- Evaluation is a key ingredient for a successful design.

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Evaluating the 1984 OMS

- Early tests of printed scenarios & user guides
- Early simulations of telephone keypad
- An Olympian joined team to provide feedback
- Interviews & demos with Olympians outside US
- Overseas interface tests with friends and family.
- Free coffee and donut tests
- Usability tests with 100 participants.
- A 'try to destroy it' test
- Pre-Olympic field-test at an international event
- Reliability of the system with heavy traffic

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Development of HutchWorld

- Many informal meetings with patients, carers & medical staff early in design

- Early prototype was informally tested on site
- Designers learned a lot e.g.
  - language of designers & users was different
  - asynchronous communication was also needed

- Redesigned to produce the portal version

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Usability testing

- User tasks investigated:
  - how users' identify was represented
  - communication
  - information searching
  - entertainment

- User satisfaction questionnaire

- Triangulation to get different perspectives

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Findings from the usability test

- The back button didn't always work
- Users didn't pay attention to navigation buttons
- Users expected all objects in the 3-D view to be clickable.
- Users did not realize that there could be others in the 3-D world with whom to chat,
- Users tried to chat to the participant list.

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Key points

- Evaluation & design are closely integrated in user-centered design.

- Some of the same techniques are used in evaluation & requirements but they are used differently (e.g., interviews & questionnaires)

- Triangulation involves using a combination of techniques to gain different perspectives

- Dealing with constraints is an important skill for evaluators to develop.

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