Chapter 3

An evaluation framework

The aims are:

- Introduce and explain the DECIDE framework.

- Discuss the conceptual, practical, and ethical issues involved in evaluation.

DECIDE: a framework to guide evaluation

- <u>D</u>etermine the *goals*.
- <u>E</u>xplore the *questions*.
- <u>C</u>hoose the evaluation *methods*.
- <u>I</u>dentify the *practical issues*.
- <u>D</u>ecide how to deal with the *ethical issues.*
- <u>E</u>valuate, analyze, interpret and present the *data*.

Determine the goals

- What are the high-level goals of the evaluation?

- Who wants it and why?

- The goals influence the methods used for the study.

- Goals vary and could be to:
  - identify the best metaphor for the design
  - check that user requirements are met
  - check for consistency
  - investigate how technology affects working practices
  - improve the usability of an existing product

Explore the questions

- Questions help to guide the evaluation.
- The goal of finding out why some customers prefer to purchase paper airline tickets rather than e-tickets can be broken down into sub-questions:
  - What are customers' attitudes to e-tickets?
  - Are they concerned about security?
  - Is the interface for obtaining them poor?
- What questions might you ask about the design of a cell phone?

Choose the evaluation approach & methods

- The evaluation method influences how data is collected, analyzed and presented.
- What data is needed to answer the questions.
- E.g. Choose usability test if you wanted to evaluate a predetermined set of tasks.
- E.g. field studies typically:
  – Involve observation and interviews.
  – Involve users in natural settings.
  – Do not involve controlled tests.
  – Produce qualitative data.
- Also, consider the practical issues such schedule, cost.

Identify practical issues

For example, how to:

- Select users
- Find evaluators
- Select equipment
- Stay on budget
- Stay on schedule

Activity

– In the study to investigate the collaborative digital ice-hockey game, the evaluators had to consider several practical issues.

– What were they?

– Which evaluation method would you use?

Decide about ethical issues

- Develop an informed consent form
- Ensure that users have their needs clearly articulated

- Participants have a right to:
  - Know the goals of the study;
  - Know what will happen to the findings;
  - Privacy of personal information;
  - Leave when they wish;
  - Be treated politely.

Decide about ethical issues

- ## Content of consent form
- Why is this research is being done?
- What will I be asked to do?
- What about confidentiality
- What are the risks of this resarch?
- What are the benefits of this research?
- Do I have to be in this research and can I stop participating at anytime?
- Statement of age of Subject and consent
- Signature and date
- E.g. What ethical issues might consider in evaluating the digital hockey ice game? How about a medical system?

Evaluate, interpret & present data

- Methods used influence how data is evaluated, interpreted and presented.

- The method used determines the type of data collected.

- Should data be treated statistically?

Evaluate, interpret & present data

The following need to be considered:

- Reliability or consistency: can the study be replicated and get same results? E.g. a highly controlled experiment would be highly reliable, but unstructured interviews would have a low reliability.

- Validity: is it measuring what you expected? Are we meeting the goal?

Evaluate, interpret & present data

- Biases: is the process creating biases? Biases occur when results are distorted.

- e.g. Evaluators get to decide what is and what is not important. (subjective)

- Scope: can the findings be generalized?

- Ecological validity: is the environment influencing the findings? i.e. Hawthorn effect. (users are aware of being studied)

Key points

- Many issues to consider before conducting an evaluation study.

- These include: goals of the study; involvment or not of users; the methods to use; practical & ethical issues; how data will be collected, analyzed & presented.

- The DECIDE framework provides a useful checklist for planning an evaluation study.

THANK YOU

Ευχαριστώ

Merci

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Vielen Dank

Hvala

DMnvwd

شكرًا

Grazie

Gracias

Bedankt

Dankie

Díky

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go raibh maith agaibh

Köszönettel

Obrigado!

СПАСИБО

감사합니다

Teşekkürler

Dziękuję

ありがとう

متشكرم

GADDA GUEY

WAD MAHAD SAN TAHAY

Asante Urakoze