Chapter 13: An evaluation framework

The aims are:

• To discuss the conceptual, practical and ethical issues involved in evaluation
• To introduce and explain the DECIDE framework

DECIDE: a framework to guide evaluation

• Determine the goals.
• Explore the questions.
• Choose the evaluation approach and methods.
• Identify the practical issues.
• Decide how to deal with the ethical issues.
• Evaluate, 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 approach used for the study
- Some examples of goals:
  - Identify the best metaphor or paradigm on which to base the design
  - Check to ensure that the final interface is consistent
  - Investigate how technology affects working practices
  - Improve the usability of an existing product

Explore the questions

- All evaluations need goals & questions to guide them
- E.g., the goal of finding out why many customers prefer to purchase paper airline tickets rather than e-tickets can be broken down into sub-questions:
  - What are customers' attitudes to these new 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 approach influences the methods used, and in turn, how data is collected, analysed and presented
- E.g. field studies typically:
  - Involve observation and interviews
  - Do not involve controlled tests in a laboratory
  - Produce qualitative data
Identify practical issues

– For example, how to:

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

Decide about ethical issues

• Develop an informed consent form

• 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.

Milgram Experiment

The experimenter (E) orders the Teacher (T) to give what the subject believed were painful electric shocks to a learner (L), who is actually an actor and confederate. The subjects believed that for each wrong answer, the learner was receiving actual shocks, but in reality there were no shocks. After being separated from the subject, the confederate set up a tape recorder integrated with the electro-shock generator, which played pre-recorded sounds for each shock level.
Summary...

- The legal and philosophic aspects of obedience are of enormous importance, but they say very little about how most people behave in concrete situations. I set up a simple experiment at Yale University to test how much pain an ordinary citizen would inflict on another person simply because he was ordered to by an experimental scientist. Stark authority was pitted against the subjects' strongest moral imperatives against hurting others, and, with the subjects' ears ringing with the screams of the victims, authority won more often than not. The extreme willingness of adults to go to almost any lengths on the command of an authority constitutes the chief finding of the study and the fact most urgently demanding explanation.

- Ordinary people, simply doing their jobs, and without any particular hostility on their part, can become agents in a terrible destructive process. Moreover, even when the destructive effects of their work become patently clear, and they are asked to carry out actions incompatible with fundamental standards of morality, relatively few people have the resources needed to resist authority.


Evaluate, interpret & present data

- The approach and methods used influence how data is evaluated, interpreted and presented
- The following need to be considered:
  - Reliability: can the study be replicated?
  - Validity: is it measuring what you expected?
  - Bias: is the process creating biased results?
  - Scope: can the findings be generalised?
  - Ecological validity: is the evaluation environment influencing the findings e.g. Hawthorne effect?

Key points

There are many issues to consider before conducting an evaluation study. These include the goals of the study, the approaches and methods to use, practical issues, ethical issues, and how the data will be collected, analysed and presented. The DECIDE framework provides a useful checklist for planning an evaluation study.
A project for you ...

- Find an evaluation study from the list of URLs on the id-book site or one of your own choice.
- Use the DECIDE framework to analyse it
- Which paradigms are involved?
- Does the study report address each aspect of DECIDE?
- Is triangulation used? If so, how?
- On a scale of 1-5, where 1 = poor and 5 = excellent, how would you rate this study?