Beginning to address user needs and behaviours

Outline of today’s lecture

- Who are the users?
- Different ways of organising systems
- Some past assumptions
- Some issues that arise in meeting user needs

Different ways of looking at things

‘Usability focuses on the users and an understanding of what they want and need to accomplish. It requires that users, not the designer of the product, determine when a product is easy to use’

Veldof et al. (1999: 116)
**Who are the users?**

Within most organisations today, there are diverse users with varying perspectives and interests.

Within the broader context in which they operate, organisations also encounter those who seek to use their information products.

**Who are the users?**

- Legislative developments (e.g. Freedom of Information Act) mean that potential users of documents (both information products and by-products) may include a range of subjects outside a given organisation.

- And/or those inside an organisation previously denied such information.

**A matter of perspective**

It all depends upon how you look at things …
User-centred versus data-centred design

'Data-centred design focuses on information-as-thing. It considers the recorded messages to be the most important aspect of information systems.'

(Allen 1996: 14)

User-centred versus data-centred design

'User-centred design focuses on information-as-process, particularly on the ways that information systems meet the information needs of users.'

(Allen 1996: 14)

Tackling user needs in the workplace

'It seems probable that the large ships that once plied the Mediterranean, propelled by legions of slaves in the galley, were designed by people who had no expectation of doing any rowing.'

(Harley Shaiken, cited in Kanigel 1997: 550)
Taylorism (scientific management)

Frederick Winslow Taylor (1856-1915)

- His life mission: increasing employees’ output
- His credos: ‘You are not paid to think’
  ‘There is only one best way’
- His strategy: separate conception from execution (deskilling)

System design implications of Taylorism

- The design of a system is to be carried out by a group of people separate from and superior to those who will use it
- In such a hierarchy, information is provided from above on the basis of ‘need to know’
- Employees – the users within an organisation – are seen as selfish, sullen, sedentary, stupid

System design implications of Taylorism

- This mindset has led to some interesting approaches to system design ...
  ‘There are, however, many disadvantages in the use of human operating units. They are somewhat fragile; they are subject to fatigue, obsolescence, disease and death; they are frequently stupid, unreliable, and limited in memory capacity ...
System design implications of Taylorism

... But beyond all this, they sometimes seek to design their own system circuitry. This, in a material, is unforgivable. Any system utilizing them must devise appropriate safeguards."

(Boguslaw 1965: 114)

When did IT user needs become important?

Before the 1980s, there was considerable overlap between those who designed IT-based information systems, and those who made use of them in the workplace.

When did IT user needs become important?

The mass adoption of computers in the workplace and beyond since then – and their use for more than number-crunching – has generated a great ‘unwashed’ of computer users uninvol ved in system or software design.
Intermediaries

Until the 1990s, ‘information professionals’ often played a central role in mediating users’ requests for documents from information systems.

In the past decade, ‘end users’ have come to play a central role in the direct accessing of information systems.

Intermediaries in decline?

On the other hand, information professionals continue to play a central role in the design and construction of information systems.

Issues that arise in meeting user needs

- Methods of gathering information on user needs
- Supporting coping and failure?
- What can be left to the users’ control?
Gathering information on user needs

Four common methods:
- Interviews
- Questionnaires
- Observation
- Document collection

Supporting coping and failure?

- What assumptions can we make about how users will interact with a new information system?
  
  'Many users have great difficulties with databases. They make many errors and perform far less optimally than an expert would ... The information systems that are being developed and the contexts of their use are too complex and changing too rapidly for us to assume that the majority of users are either experts, or indeed novices who want to become experts as soon as possible ...'

Supporting coping and failure?

... We should support Borgman’s ‘perpetual novices’ (who may nevertheless be experts in other domains) and their inevitable coping strategies, failures and need for help'

(Twidale & Nichols 1998: 189, 190-1)
What can be left to the users’ control?

- nothing?
- ‘chrome’ (i.e. appearance) ?
- anything else?

Who decides what users want?

‘The problem with traditional requirements analysis is that detailed information about what the real users actually do and how they do it is often not collected. Consequently, designers often fulfil the requirements specified by management without taking account of the real needs of users’

(Preece et al. 1993: 44)

Relations between users and developers

- ‘the inevitable disequilibrium of relations between the user and the programmer’ (Fuller 2002: 10)
- ‘Developers are not typical end-users’ (Nichols & Twidale 2003), and may see the relationship between functionality and usability differently to others
Relations between users and developers

'We cannot discover how users can work best with systems until the systems are built, yet we should build systems based on knowledge of users and how they work.'

'This is a user-centred design paradox.'

(Marchionini 1995: 75)

Exercises for Lab 7

How do online retail car sale sites address user needs?

5. Further reading