

## Learning skills

- Aim
  - Distinguish IT skills from other IT competence
- Literature
  - Textbook
    - Chapter 1
    - Introduction to Part I
    - Section 2.1

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## Skill

- Practical competence
  - Ability to walk, bike, speak, type...
- IT user skill
  - Ability to use IT for a purpose
    - Type an SMS on a numeric keyboard
    - Format a document
    - Summarise columns in spreadsheets
    - Retouch a photo with an image editor
    - Point with the mouse
    - Search the web



Changing the typeball

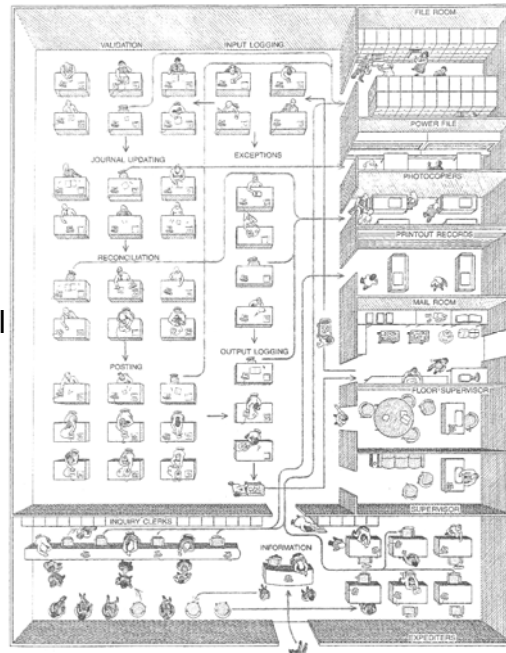
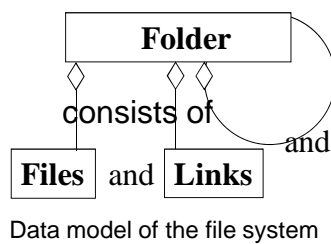
Nervik & Nordheim: Ikke bare maskiner. Historien om IBM i Norge 1935-1985, s 57

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## Understanding

- Ability to talk about it  
 "The  $\Sigma$  function can summarise cells in a row or a column."
- Often expressed as a model



Industrial office.  
 Scientific American, 1982, p 127

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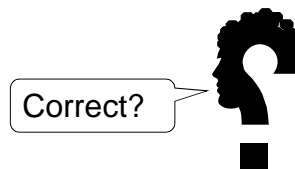
## 2 levels of competence in 12 languages

### 1. Skill

- Know-how
- Ferdighet
- Geschick
- Habilidad
- Umiejętność
- мастерство
- Beceri
- مهارة
- Ujuzi
- مهارت
- 技能
- スキル

### 2. Understanding

- Know-that, know-what, know-why
- Forståelse
- Verständnis
- Comprensión
- Zrozumienie
- понимание
- Anlayış
- فهم
- Ufahamu
- تفہیم
- 理解
- 理解



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## Learning

Development of competence that provides a relatively stable change of behaviour

No Learning

Discovering the Track Changes functionality  
→Using it regularly

Finding out how to set up the internet connection  
→Not being able to repeat it the next time needed

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## Repetition

- Practicing the same skill repeatedly
  - Doing it more efficiently
  - Automating it
    - Do it without attention
- Examples
  - Walking
  - Typing



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## Imitation

- Observing
  - Others' behaviour
    - Random
    - Teachers' instructions
  - Instruction videos
  - Instruction sheets
- Repeating it

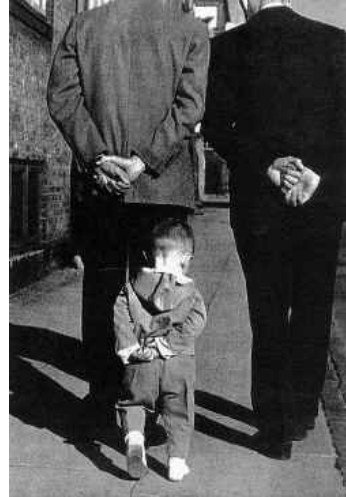


Foto: Zentall Akins : Imitation in Animals: Evidence, Function, and Mechanisms. <http://www.pigeon.psy.tufts.edu/avc/zentall/> 7

## Teacher's instruction



Fphoto: www.megabyte.net

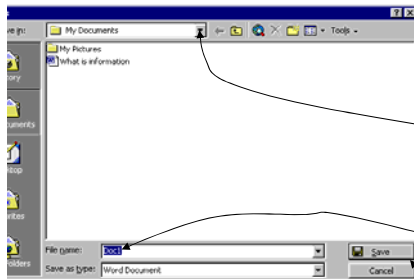
Learners imitate during course


Transfer of learning

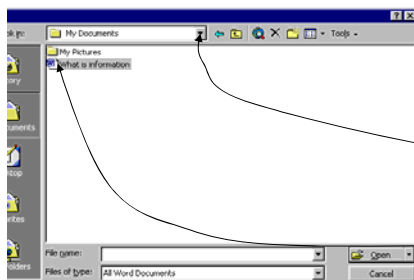



And forget when back at work

## An instruction sheet for novices



- Save and open
- 1 Saving. Before quitting a program:
  - 1.1 Click the  button.
  - 1.2 Click the down-arrow in the “Save in” box.
  - 1.3 Type the name you will give the file in the “File name:” box.
  - 1.4 Click the “Save” button



- 2 Opening. The next time you have opened the program and want to work on the same file:
  - 2.1 Click the  button
  - 2.2 Click the down-arrow in the “Search in” box.
  - 2.3 Double-click on the file name.

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## Instruction videos

- 06 Google Spreadsheets Cell Formula pt 6 of 7  
<http://www.youtube.com/watch?v=vZvtsNotIEo>
  - mrwaynesclass, 2009
- Creating formulas using cell ranges in an OpenOffice calc spreadsheet  
<http://www.youtube.com/watch?v=U7QIOpluAF0>
  - COL CCNC, 2010

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