Protocol data

Expertise and skill

• Introspection:
  – Analyze your own perceptions/thoughts

• Giving a verbal protocol:
  – Thinking out loud: say whatever comes to mind
    • Not that different from muttering to yourself
    • Which we sometimes do automatically
  – Useful for analyzing a train of thought
    • Work from a transcript
  • Math problem...

Expertise in chess

Chess masters can chunk a group of pieces into a unit
Are no better than novices on a random board

Effects of expertise

• Experts have more semantic and procedural knowledge than novices
• This helps them perceive and remember details of the current situation
  – In their domain of expertise
  – A chess expert wouldn’t necessarily have better memory for things non-chess

Cognitive skills

(Kolers, 1976)

Participants read 200 pages of inverted text
• Returned a year later, read another 100 pages of inverted text
• Measure: Time to read a page
Cognitive skills

Skills are easier to learn when fluid intelligence is at its peak
– Which is in your early 20s
– Learn something hard now

Relearning savings

- Cognitive skills are like riding a bike
  – Never completely forget
- Skills are easier to learn when fluid intelligence is at its peak
  – Which is in your early 20s
  – Learn something hard now