

DUAL CODING WITH TEACHERS

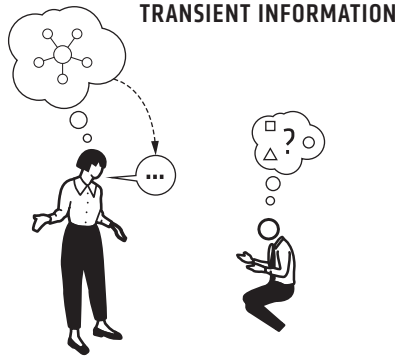


A John Catt
Publication

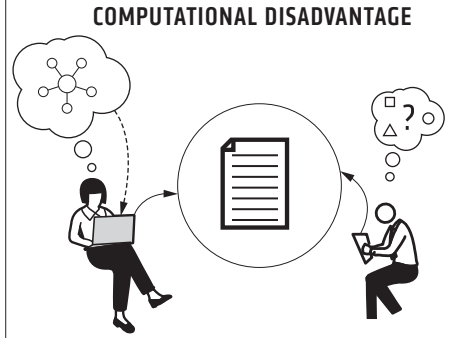
SUMMARY OF
PRESENTATION
1 OF SERIES

RESEARCHED
BIRMINGHAM
02 | 03 | 2019

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The teacher's schema is invisible. Words disappear.

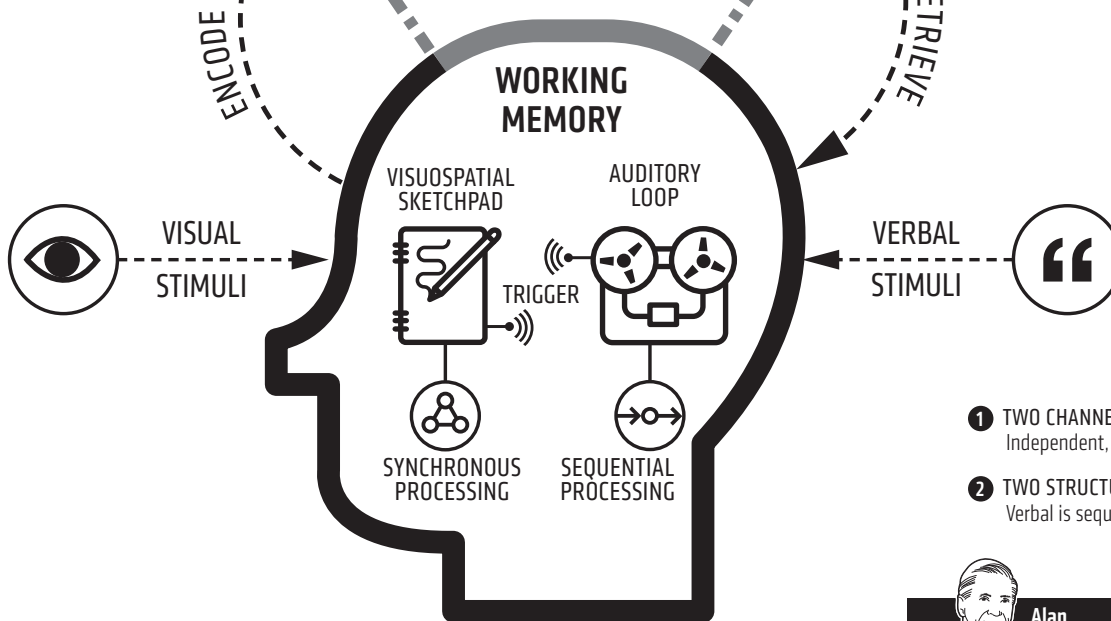


The author's schema is hidden within the text.

SITUATIONS

LONG TERM MEMORY

WORKING MEMORY



DOUBLE-BARRELLED LEARNING

Using both visual and verbal channels doubles your memory traces

- TWO CHANNELS**
Independent, concurrent and coordinated
- TWO STRUCTURES**
Verbal is sequential; visual, simultaneous



Alan Paivio
Mental Representations.
A Dual Coding Approach, 1990, OUP

DUAL CODING THEORY

DIRECT ATTENTION

Graphic design can draw attention to the important elements in a visual display, avoiding distraction or confusion.



TRIGGER PRIOR KNOWLEDGE

The clarity of graphic displays helps connect to prior knowledge, which supports the learning of new information.



MANAGE COGNITIVE LOAD

Graphic design can ensure that there is no waste of cognitive resources in dealing with split attention or confusing organisation.



BUILD SCHEMA

The explicit organisation of information helps its encoding into long-term memory and the building of meaningful schema.



TRANSFER LTM INTO WORKING MEMORY

The more organised the information is when it is encoded, the easier it is to retrieve it and use in working memory.



MOTIVATE LEARNERS

Visuals help avoid a wall of words and reassure students that meaning can be accessed, as well as evoking interest.



BENEFITS

1

Even the best-planned graphic, if executed poorly, or laid out haphazardly, will fail to realise the potential of that graphic to enhance learning.

Graphics for Learning

PROVEN GUIDELINES FOR PLANNING, DESIGNING, AND EVALUATING VISUALS IN TRAINING MATERIALS
2004, Pfeiffer

1 CUT

The biggest improvement you can make to your documents and slides is to reduce the content in them.



2 CHUNK

Organise your content into easily identified groups, each with a title that stands out (font size & weight).



3 ALIGN

The text chunks, and any visual element, must be aligned to create a sense of order for easier reading.



4 RESTRAIN

Don't try to be 'artistic' – apply restraint to your fonts (2 types max.) and colours (spot not coverage).



EXECUTION



Ruth Colvin
Clark

6



Chopeta
Lyons