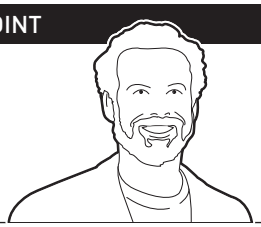
Mental Models

HOW2

PINPOINT



The packets that organise information and make sense of experience.

Daniel Goleman

The power of mental models

Mental models —also known as schemas— are the storehouse of our understanding and memory.

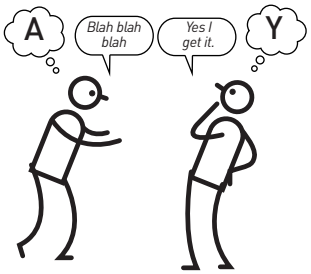
Teachers' primary task, whatever educational approach, is to help develop their students' mental models. To do that, they need to be able to know what mental models their students have about the subject and its concepts. The major question is *"how to do that?"*.

Mentalese

To make things more difficult, Steven Pinker claims we don't think in words but a sort of personal private language he calls *mentalese*.

A communication problem

If teaching and learning is, essentially, the sharing of mental models, we have major communication probems to overcome.



The visual solution

Visuals have a more direct access to mental models than words alone. Visual models are mental models taken out of the head and put into graphic format. Meaning is evident in the grouping and connecting.

Mental models are the images, assumptions and stories which we carry in our minds.

Peter Senge

Schemas are the ghost in the machine, the intelligence that guides information as it flows through the mind.

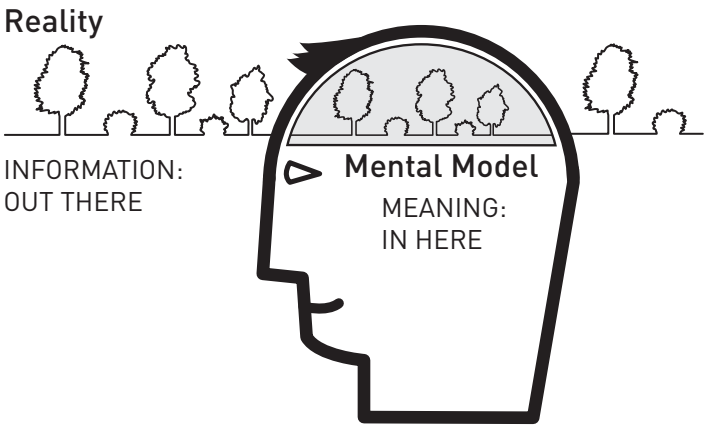
Steven Pinker

Instructional methods that promote efficient learning serve as substitutes for missing schemas in the long-term memory of novices.

Ruth Clark

Personal meaning-making

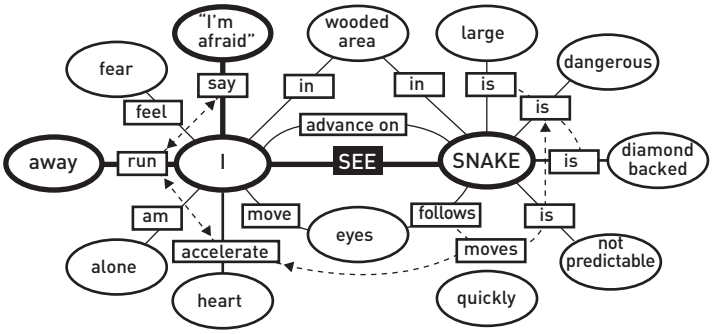
Mental models are our personal interpretation of reality. They shape our understanding, beliefs and actions. The trouble is we



The basis for our actions

This diagram was created by Danial Goleman of his mental model to explain his responses to seeing a snake. It is his attempt to communicate just how private, complex and powerful mental models are.

Grasping this significance will influence how you view assessment for learning. It will change how you communicate the major concepts of your subject as well as how to assess your students' understanding of them.



REFERENCES

Goleman, D. (1985)
Vital Lies, Simple Truths,
Bloomsbury, London

Pinker, S. (1997)
How the Mind Works
Penguin, London

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