SETTING THE CONTEXT

Historical - **1981 -> present**

maturing understanding re learning and effective pedagogy

National Context - Melbourne Declaration on Educational Goals for Young Australians - Dec 08
National Curriculum Framework

States

QLD - Productive Pedagogies
TAS - Teaching Learning and Assessment Principles
VIC - POLT Principles of Learning & Teaching
NSW - Quality Teaching Framework

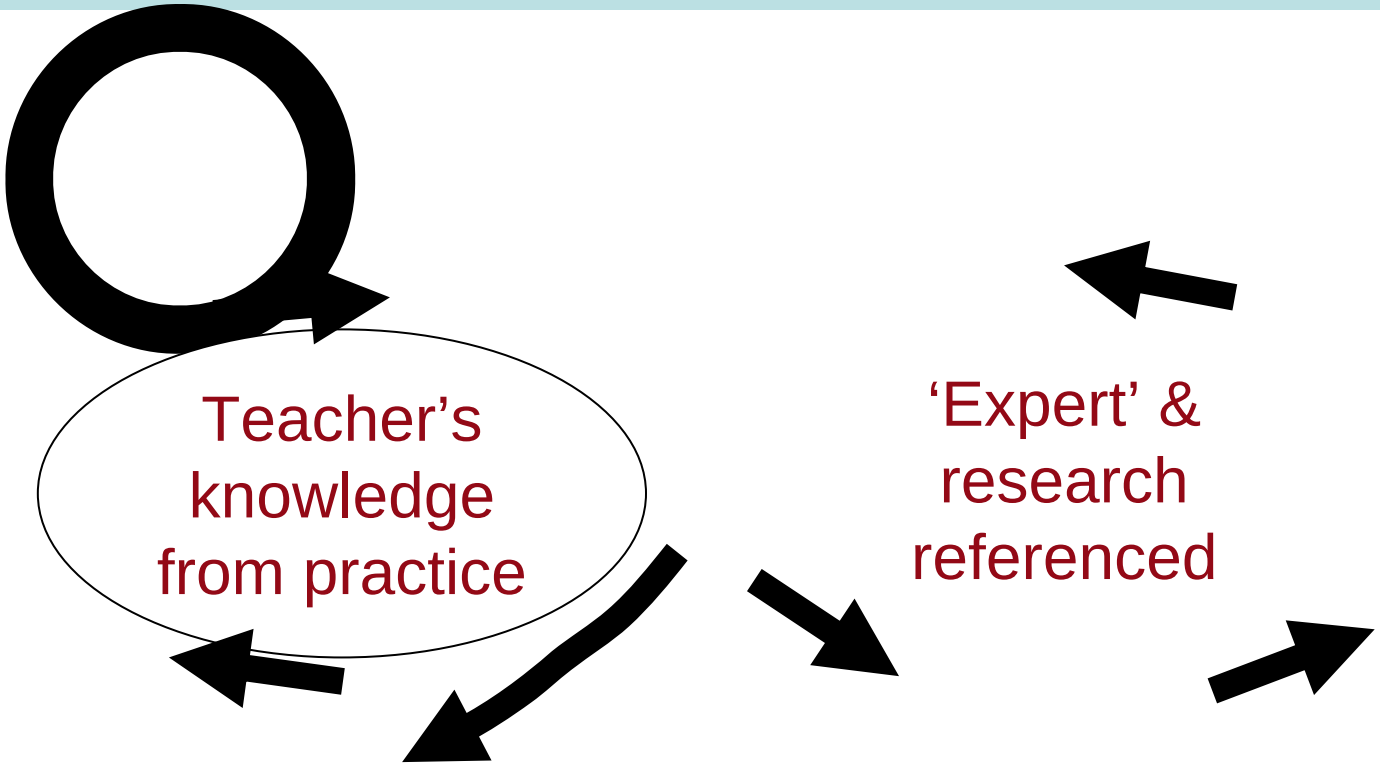
SETTING THE CONTEXT

South Australia

DIAF - DECS Improvement & Accountability Framework

SA Teaching for Effective Learning Compass

L2L approach to Professional Learning ☐



a mutually informing relationship

SA TfEL COMPASS & DECS Improvement and Accountability Framework

SA TfEL Compass provides a coherent framework for reporting individual and whole school development with regard to teaching quality.

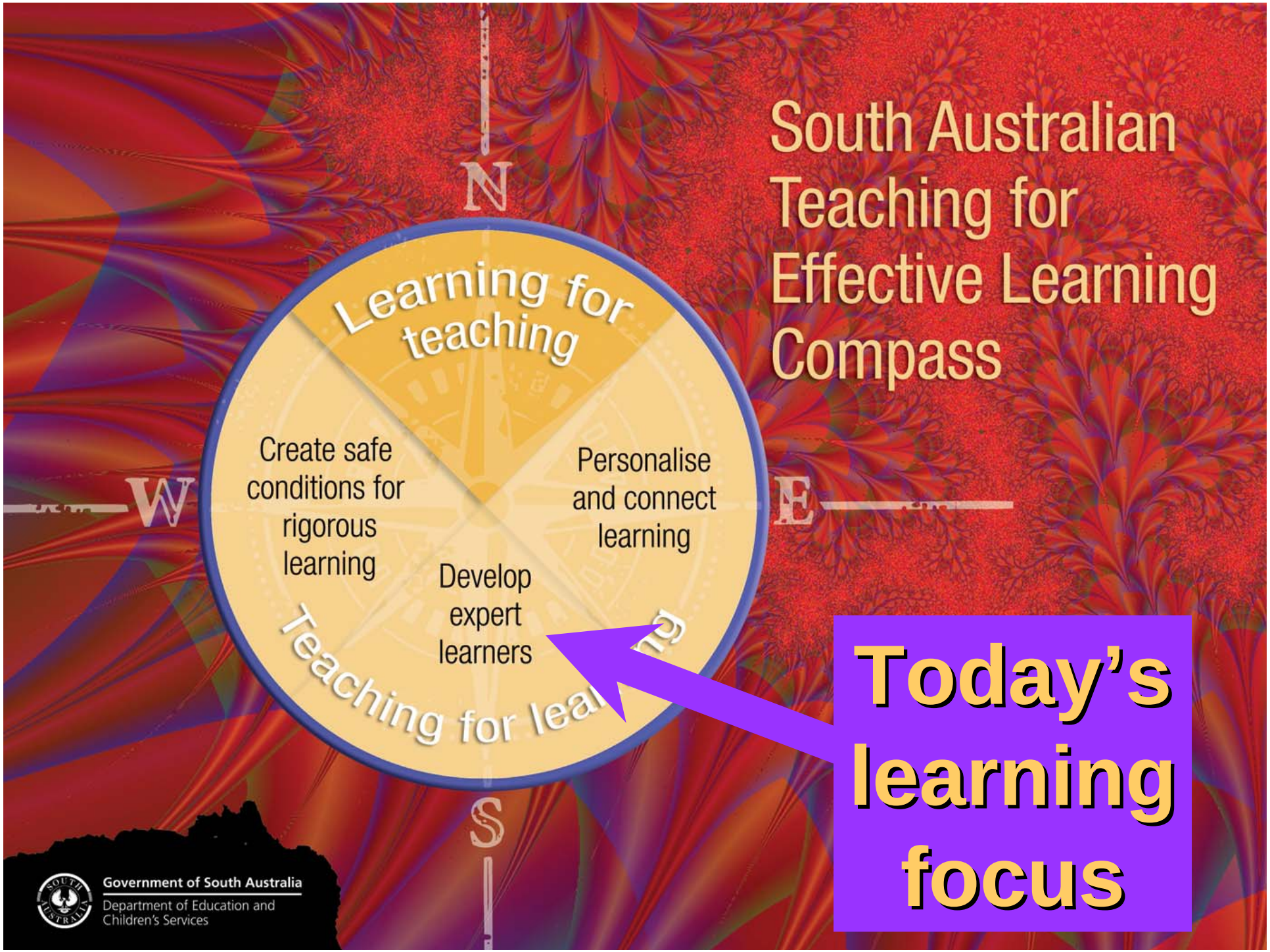
SA TfEL Compass defines standards for quality teaching

SA TfEL Compass resource includes review tools for individuals and whole school reflection

QuickTime™ and a
TIFF (Uncompressed) decompressor
are needed to see this picture.

SA TfEL Compass is itself an intervention and simultaneously provides support for improving practice to achieve greater success.

SA TfEL Compass points the way to improved teaching practice


South Australian Teaching for Effective Learning Compass
N
W
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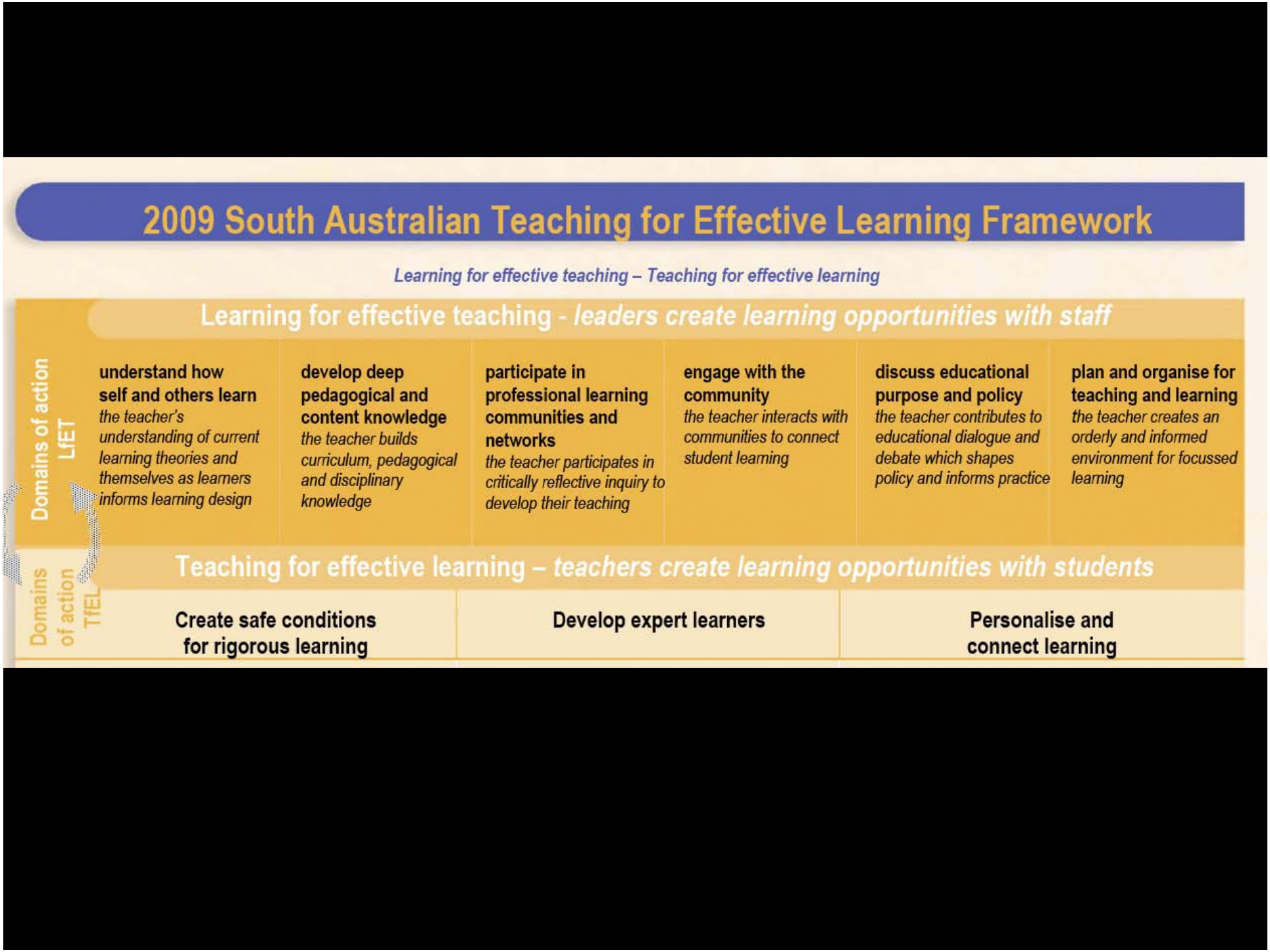
Learning for teaching
Create safe conditions for rigorous learning
Personalise and connect learning
Develop expert learners
Teaching for lea
Today's learning focus
Government of South Australia
Department of Education and Children's Services


2009 South Australian Teaching for Effective Learning Framework
Learning for effective teaching – Teaching for effective learning
Learning for effective teaching - leaders create learning opportunities with staff
Domains of action LfET
understand how self and others learn
the teacher's understanding of current learning theories and themselves as learners informs learning design
develop deep pedagogical and content knowledge
the teacher builds curriculum, pedagogical and disciplinary knowledge
participate in professional learning communities and networks
the teacher participates in critically reflective inquiry to develop their teaching
engage with the community
the teacher interacts with communities to connect student learning
discuss educational purpose and policy
the teacher contributes to educational dialogue and debate which shapes policy and informs practice
plan and organise for teaching and learning
the teacher creates an orderly and informed environment for focussed learning
Teaching for effective learning – teachers create learning opportunities with students
Domains of action TfEL
Create safe conditions for rigorous learning
Develop expert learners
Personalise and connect learning

Old picture of schooling	New picture of schooling
Teaching is telling	To teach is to create the conditions for involved learning
Learning is listening	To learn is to be involved
Knowledge is an object	Knowledge is a 'story that works'
To be educated is to know	To be educated is to relate to knowledge sympathetically inquisitively, critically and creatively

Adapted from Harpaz, 2002, p.1–26

As Plato once said….

The educator's role is not to put knowledge where knowledge does not exist but rather to lead the mind's eye so that it might see for itself.

TURNING TO ‘Expert Learner’

Scan your mind over many of the students you have taught.

Identify some you believe were ‘expert’ learners.

What were their:

- ***Qualities***
- ***Attributes/dispositions***
- ***Skills***

The map is not the territory.

Alfred Korzybski

We have multiple ways of knowing - powerful learning integrates our various ways of knowing.

I hear, I forget
I see, I remember
I do, I understand.

Confucius *551 BC - 479 BC*

Proust was a Neuroscientist
Jonah Lehrer

Antonio Damasio's research on the body-mind loop provides evidence from Neuroscience that supports the wisdom expressed in the ancient saying by Confucius.

Draft South Australian Teaching for Effective Learning Compass

Learning for teaching – Teaching for learning

Teacher learning

Learning for teaching

- **understanding how self and others learn**
  the teacher develops understanding of current learning theories
- **developing deep content knowledge**
  the teacher builds curriculum and real world knowledge of teaching field(s)
- **participating in professional learning communities**
  the teacher participates in critically reflective inquiry to develop their teaching practice
- **engaging with the community**
  the teacher interacts with communities to connect student learning
- **discussing educational purpose and policy**
  the teacher contributes to educational debate which shapes policy and informs practice

Domains of action

Teaching for learning

Create safe conditions for rigorous learning	Develop expert learners	Personalise and connect learning
Pedagogical elements		
• developing democratic relationships *the teacher acknowledges shared power as a fundamental condition for learning*	• teaching students how to learn *the teacher helps students develop metacognitive understandings, language and skills*	• building on learners' understandings *the teacher establishes students' prior knowledge and cultural practices as a starting point for the curriculum*
• building a community of learners *the teacher involves students in understanding how to manage themselves and support each other as learners*	• fostering deep understanding *the teacher helps students build conceptual knowledge around big ideas and make rich connections to their application in a range of contexts*	• connecting learning to student lives and aspirations *the teacher ensures that learning builds on the resources, skills, knowledge and goals students develop in their homes and communities*
• negotiating learning *the teacher responds to students' changing needs and involves students in deciding the direction of the curriculum*	• exploring the construction of knowledge *the teacher shows that knowledge is open to question, serves particular purposes and explores differences respectfully*	• applying and assessing learning in authentic contexts *the teacher structures the curriculum so that students apply their learning to real-life problems*
• supporting and challenging students to be successful *the teacher explicitly challenges students and helps them to achieve high standards*	• promoting dialogue as a means of learning *the teacher provides opportunities for students to learn through interaction and conversation with others*	• communicating learning in multiple modes *the teacher ensures that the curriculum incorporates rich and varied modes of making meaning, including new and old literacies*

Learning for effective teaching - *leaders*

Domains of action LfET

understand how self and others learn
the teacher's understanding of current learning theories and themselves as learners informs learning design

develop deep pedagogical and content knowledge
the teacher builds curriculum, pedagogical and disciplinary knowledge

participate in professional learning communities and networks
the teacher participates in critically reflective inquiry to develop their teaching

Develop expert learners

teach students how to learn
the teacher develops student understanding of learning and expands their strategies for thinking, learning and working collaboratively

foster deep understanding and skilful action
the teacher helps students build rich conceptual knowledge and mastery of complex skills

explore the construction of knowledge
the teacher shows that knowledge is open to question and serves particular purposes

promote dialogue as a means of learning
the teacher provides opportunities for students to learn through interaction and learning conversation with others

What do we know about the ***nature of learning?***

What do we mean by the term learning?
Can you put your response into words?

Learning is. . . .

Perhaps you can think of a visual image or analogy for learning

Learning is like. . . .


BLAH BLAH
BLAH BLAH
BLAH BLAH
BLAH BLAH


BLAH BLAH
BLAH BLAH
D.E.E
GAS.

Learning is a complex process.

Key Questions

WHAT *do we know about:*

- *the* ***nature*** *of learning?*
- *the* ***process*** *of learning?*

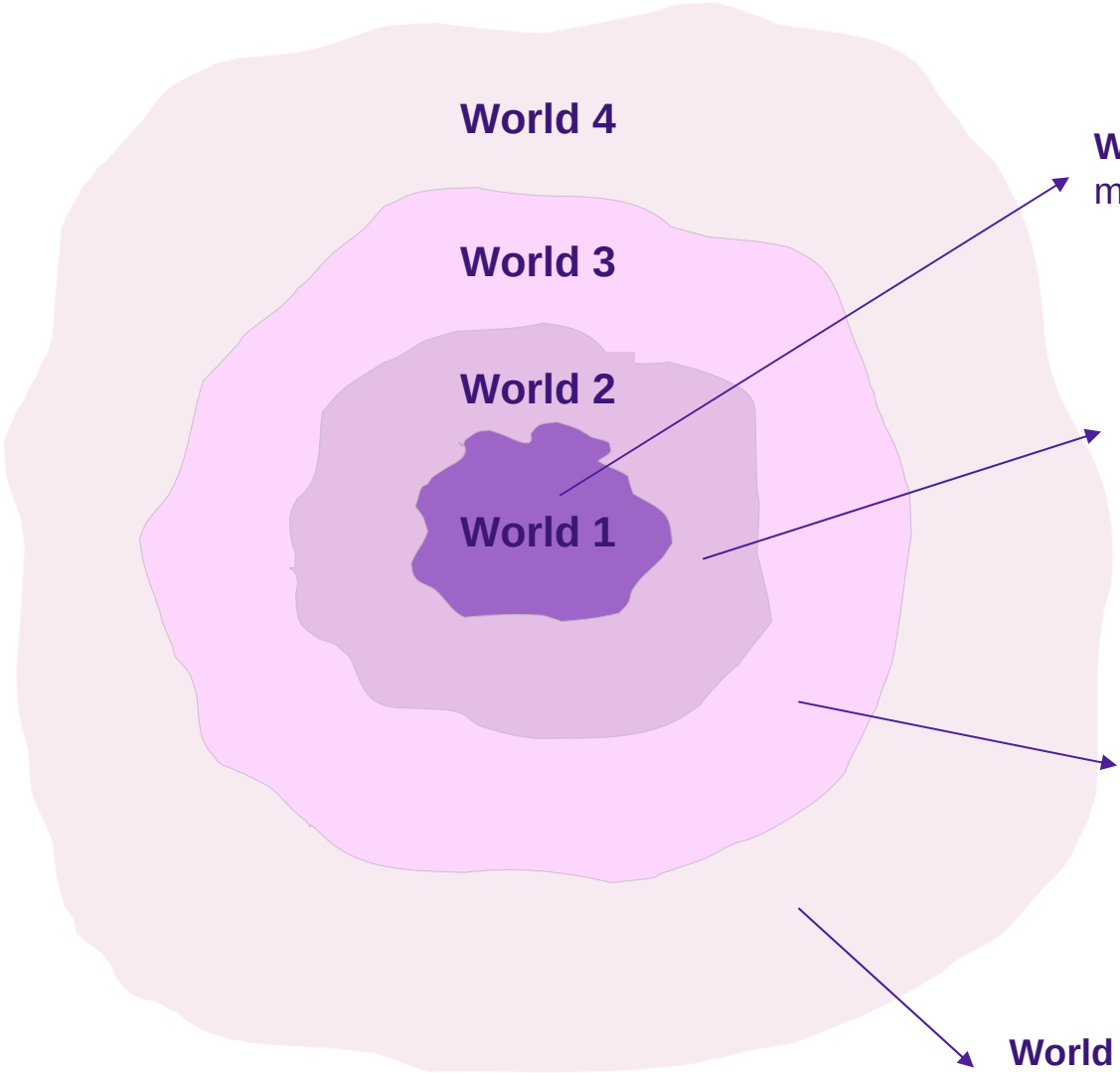
HOW *can we* ***enhance learning?***

And the dominant analogies that have emerged from asking >200,000 people:
"What is learning like?"

- **journey**
- **growth**
- **construction- reconstructio**
  creation - recreation
- **transformation**
- **enlightenment**
- **empowerment**
- **enrichment**

The Nature of Learning - John Holt's model of the worlds we live in

adapted from "What do I do Monday?"



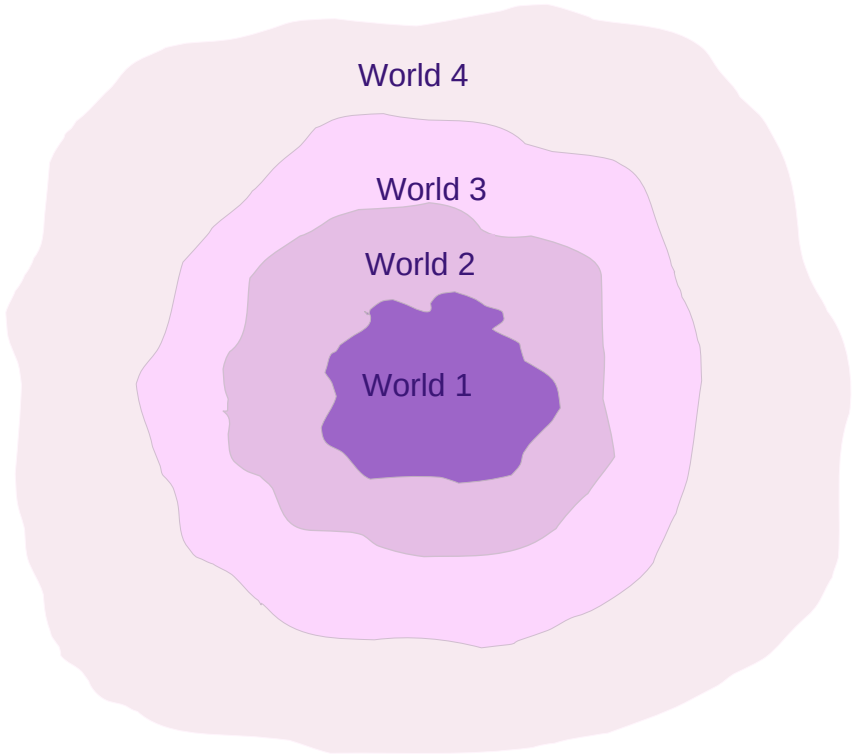
World 1 is my **inner world**, the world inside my skin - my very inner psychological world.

World 2 is the world of **my direct experience**, the world of things I've done, people I have met, places I have been - this, with my inner world are the worlds of my mental models - my "knowing" of the world.

World 3 is the world **I know about**, have read about or heard about - I do not know it directly.

World 4 is the world of **infinite possibilities**. I haven't heard about it nor imagined it - it is the **world of my ignorance**; it is the world I don't know that I don't know!

Natural, Powerful Human Learning



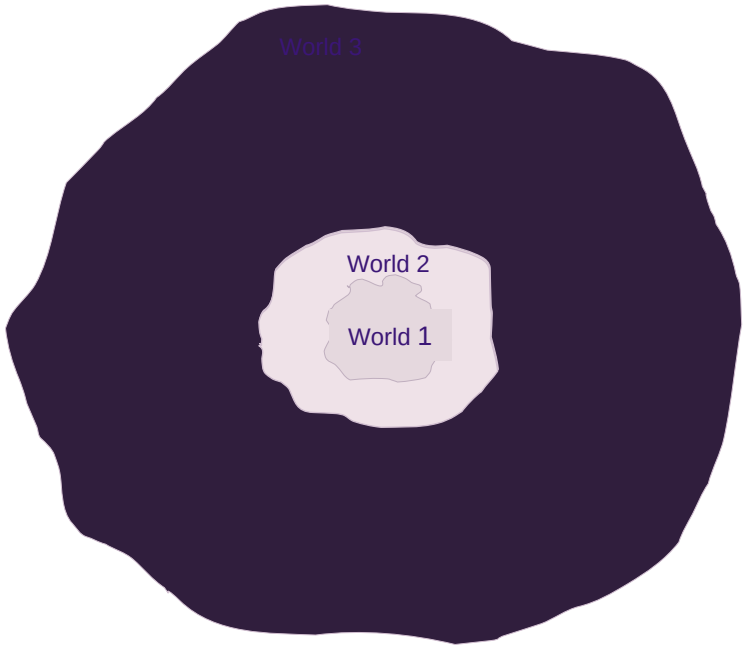
- ***personally meaningful***
- ***integrated***
- ***coherent***
- ***transformative***
- ***transferable***

Knowledge in Education

'I have been convinced for some time that the "learning outcome" of ….education should be more than what the western world typically means by "knowledge"; that it is ***to engage the whole "being" of people, their heads, hearts and life-styles, and is to inform, form and transform their identity and agency in the world.'***

Thomas H. Groome, Sharing Faith, p.2

Unnatural Human Learning - 'knowing about' and 'knowing about what other people know' but NOT KNOWING!



- ***non-meaningful***
- ***disconnected***
- ***incoherent***
- ***non-transformative***
- ***non-transferable***

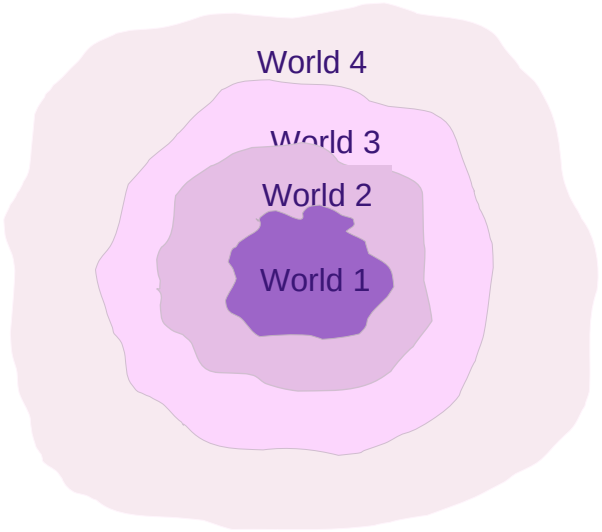
They work to pass and not to know.
Alas they pass and do not know!

Bertrand Russell

You can know the name of a bird in all the languages of the world, but when you're finished, you'll know absolutely nothing whatever about the bird... So let's look at the bird and see what it's doing —that's what counts. I learned very early the difference between knowing the name of something and knowing something.

Richard Feynman

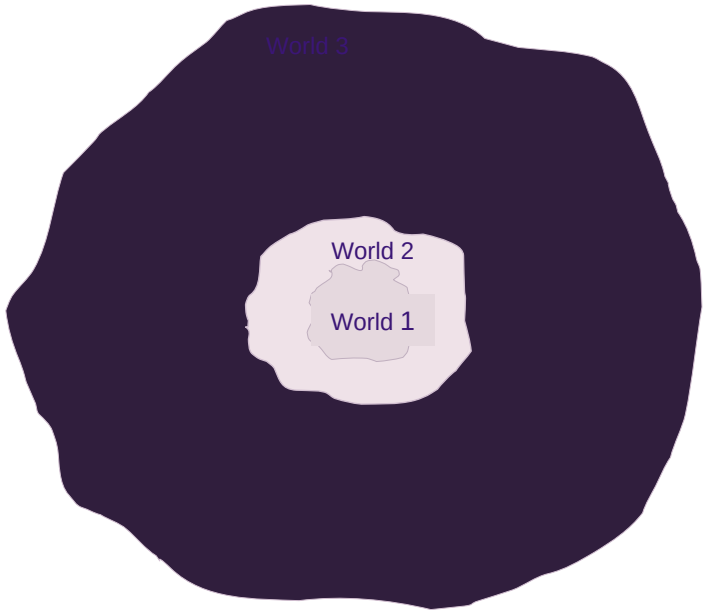
What learning do you value?



transformative

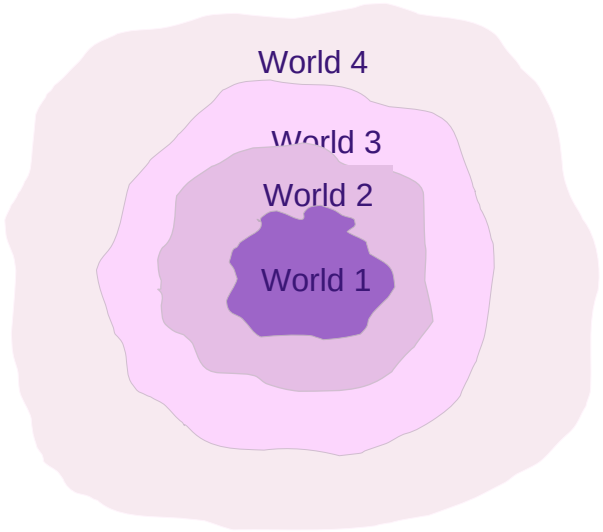
- ***personally meaningful***
- ***integrated***
- ***coherent***
- ***transferable***

NOT



non-transformative

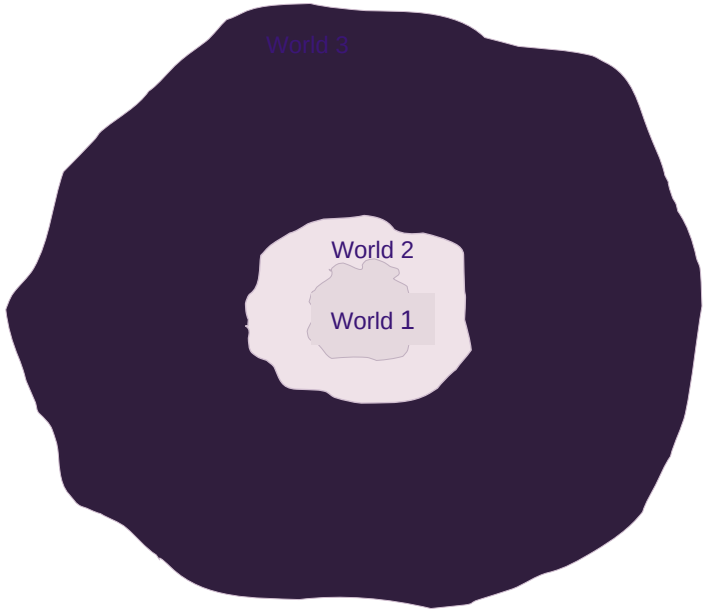
- non-meaningful
- disconnected
- incoherent
- non-transferable



What are the factors that contribute to learning being…

transformative

OR



non-transformative

Factors which promote meaningful, transformative learning:

Intrinsic motivation

- learner purpose not teacher purpose
- relevance/interest
- challenge
- curiosity

Direct experience

- practical application
- vicarious experience; simulation; role play

Crisis/catastrophe

Sharing, having to teach someone else, dialogue

Teacher/mentor passion

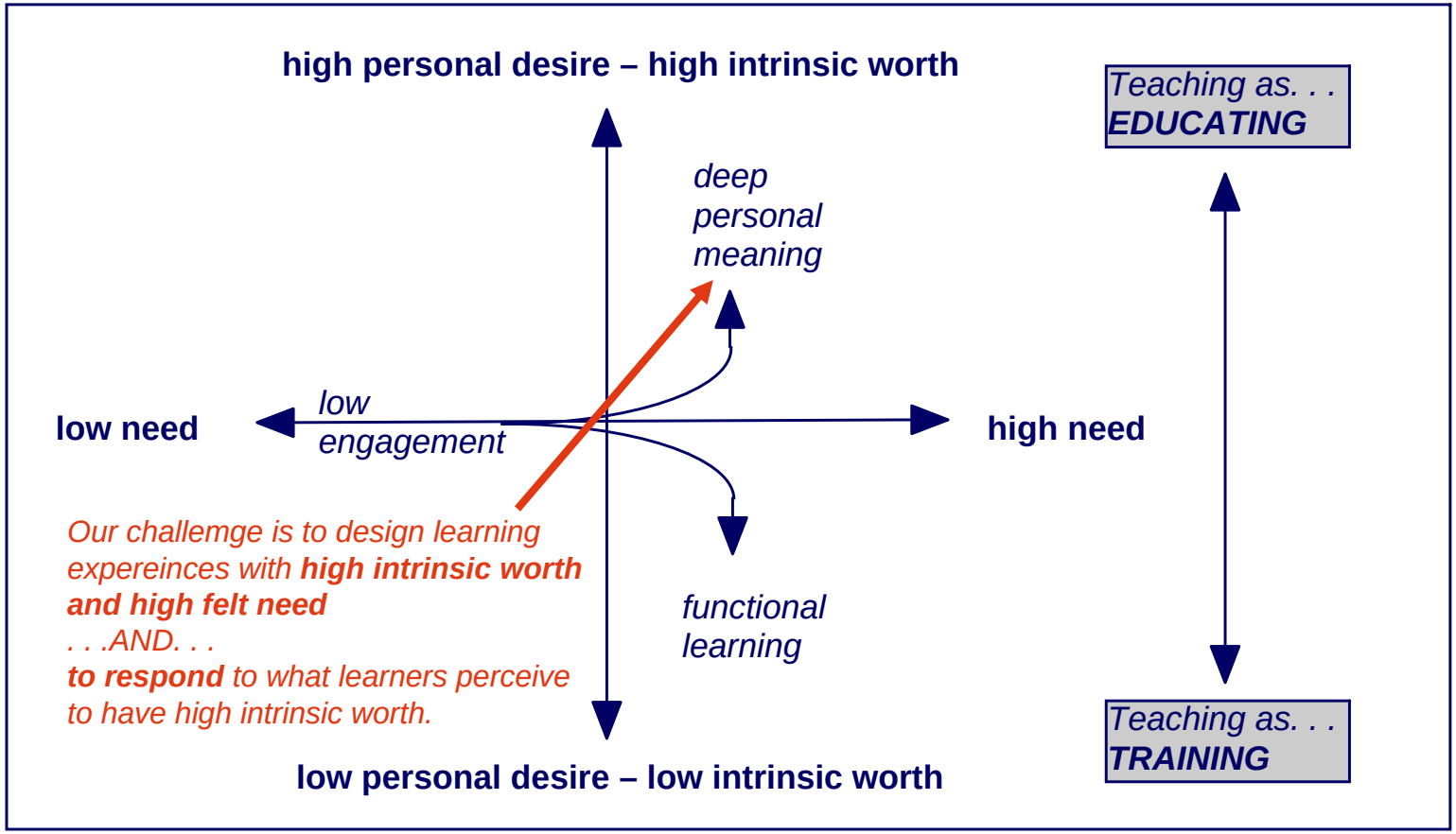
Strategies which **connect at the point of personal experience**

Strategies which **stimulate emotions**

Strategies which **connect with, or challenge, inner belief system**

Metacognition - self knowledge as learner; repertoire of learning

The impact of aspects of motivation on the nature of learning



Adapted from discussions with participants in the 'Principles of Effective Learning & Teaching Workshop'
Apple Innovative Technology Schools Conference, Wollongong,1998

Authentic assessment *promotes powerful learning.*

Authentic learning & assessment have:

- ***a real purpose & real audience*** *for a:*
  - ***process***
  - ***product***
  - ***performance***
  - ***presentation***

It is characterised by being:

- ***personally meaningful***
- ***self created or constructed***
- ***assisted by 'teacher' mediation***
- ***negotiated & agreed guidelines & goals***

and has ***self, (peer) and expert evaluation of product & process***

INSTRUCTIVIST vs CONSTRUCTIVIST PEDAGOGY

In recent years, approaches to teaching have become caught in an 'either - or' conceptualistion of pedagogical approach rather than a 'both-and' approach.

A true 'constructivist' approach focuses on ensuring meaning and understanding are constructed in the learner's mind.

At times, for certain students in certain contexts this might demand direct, explicit instruction or it might mean open exploration or it might require some approaches in between.

Learner initiates, chooses, directs
Teacher facilitates

OR

Direct, explicit Instruction

INSTRUCTIVIST vs CONSTRUCTIVIST PEDAGOGY

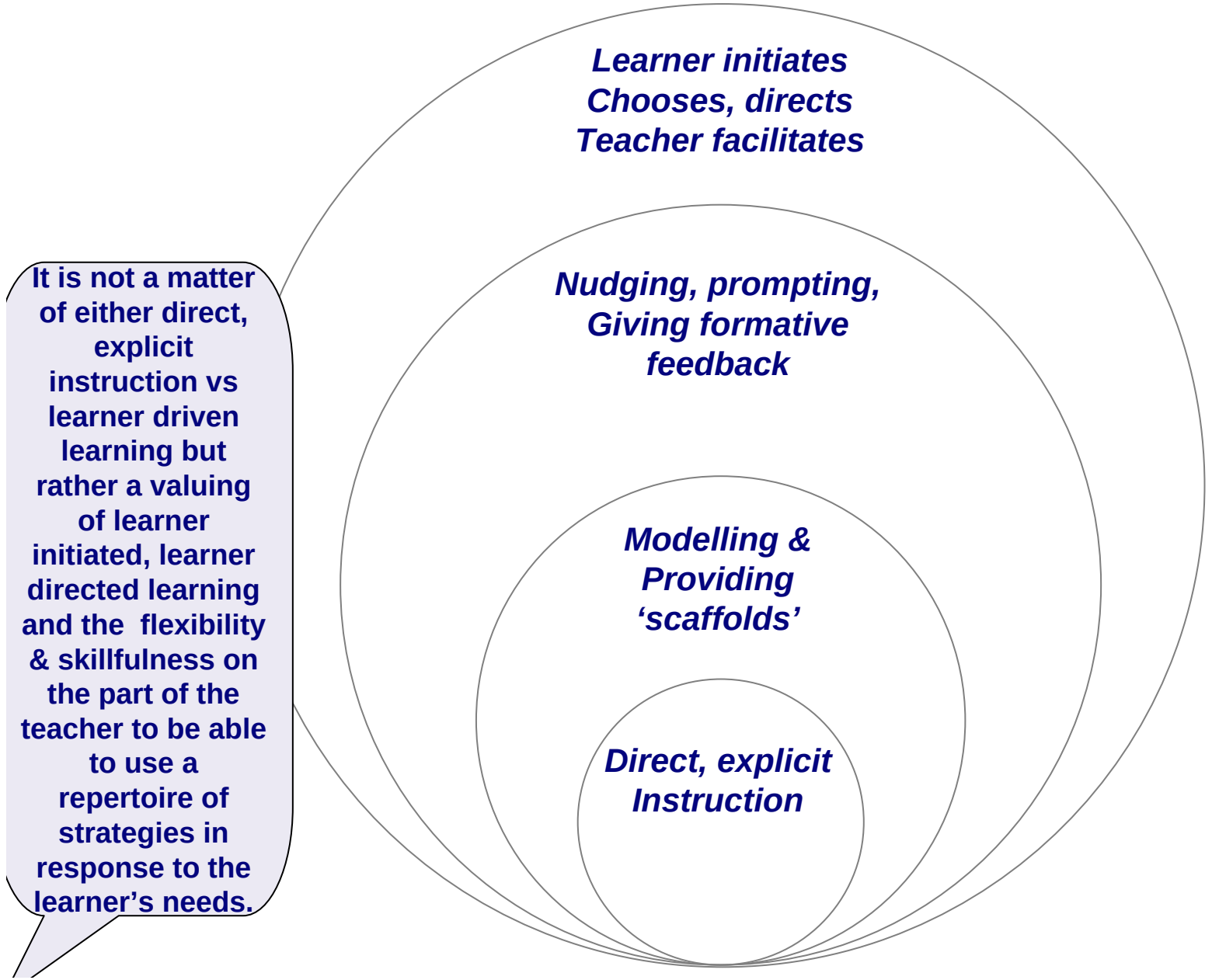
Learner initiates, chooses, directs
Teacher facilitates

OR

Direct, explicit Instruction

Reframing . . . going beyond 'EITHER-OR' to 'BOTH-AND'

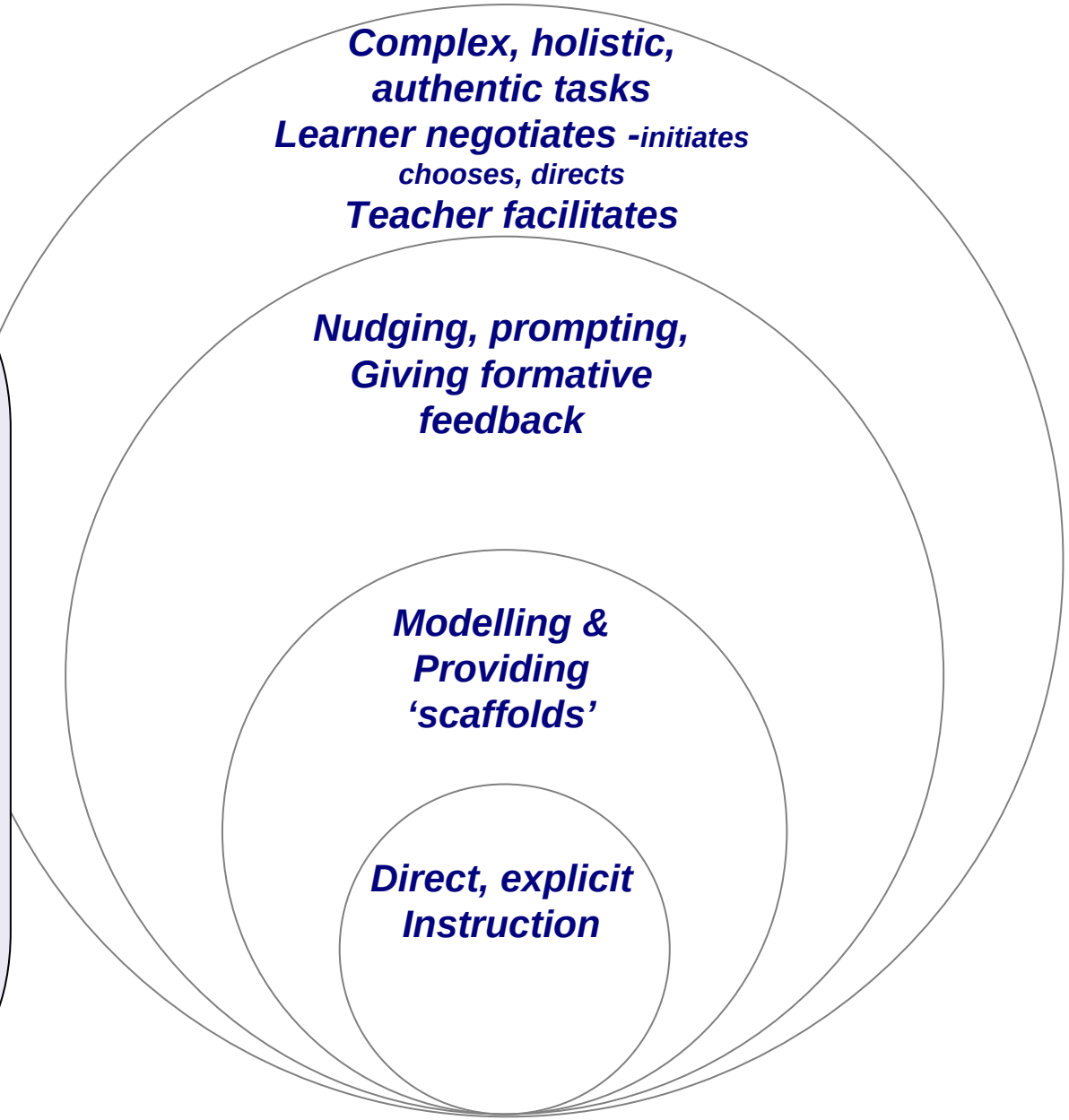
CONSTRUCTIVIST PEDAGOGY



It is not a matter of either direct, explicit instruction vs learner driven learning but rather a valuing of learner initiated, learner directed learning and the flexibility & skillfulness on the part of the teacher to be able to use a repertoire of strategies in response to the learner's needs.

Reframing . . . going beyond 'EITHER-OR' to 'BOTH-AND'

CONSTRUCTIVIST PEDAGOGY



It is not a matter of either direct, explicit instruction vs learner driven learning but rather a valuing of learner initiated, learner directed learning and the flexibility & skilfulness on the part of the teacher to be able to use a repertoire of strategies in response to the learner's needs.

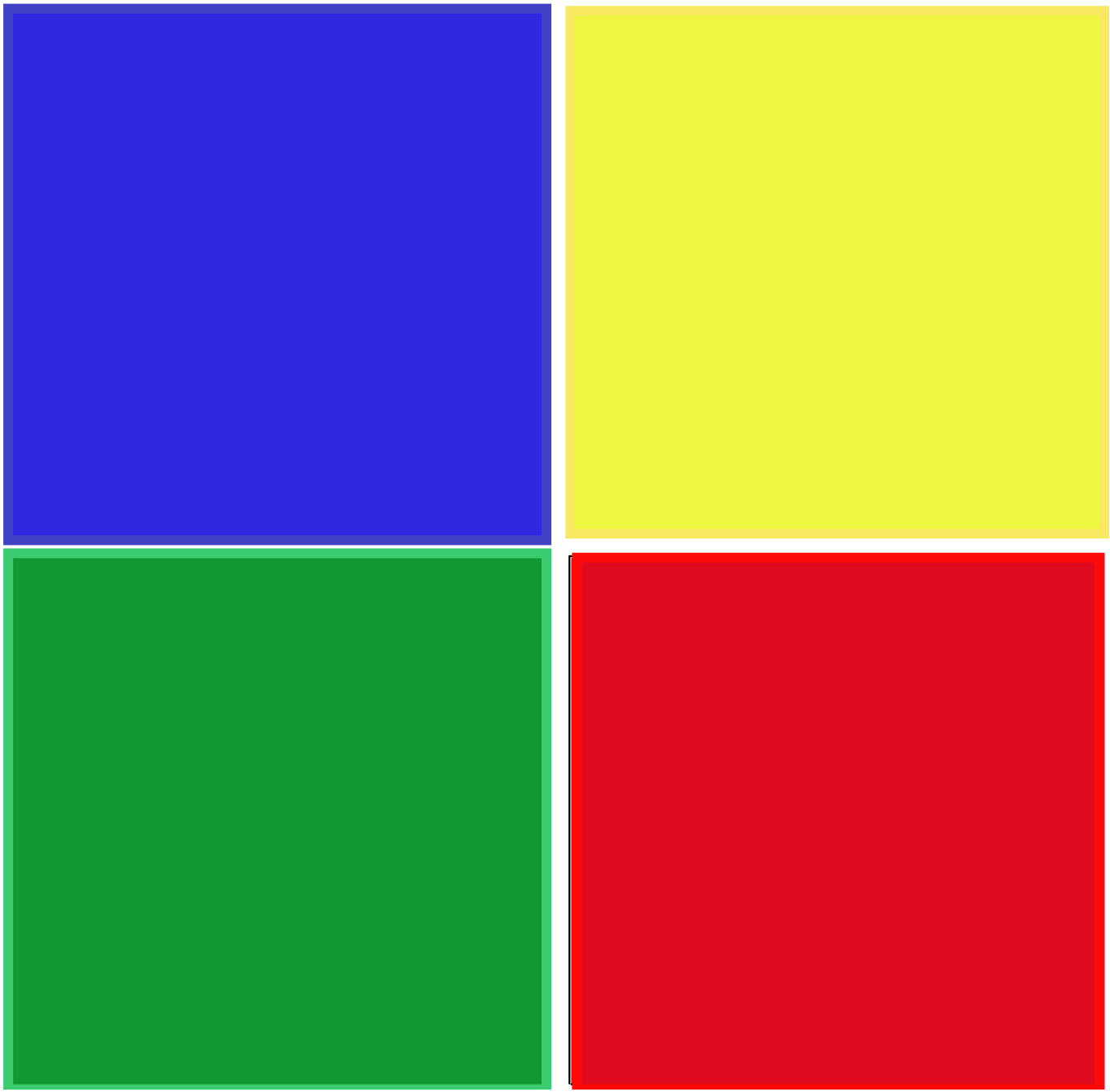
TURNING TO Strategies for Thinking

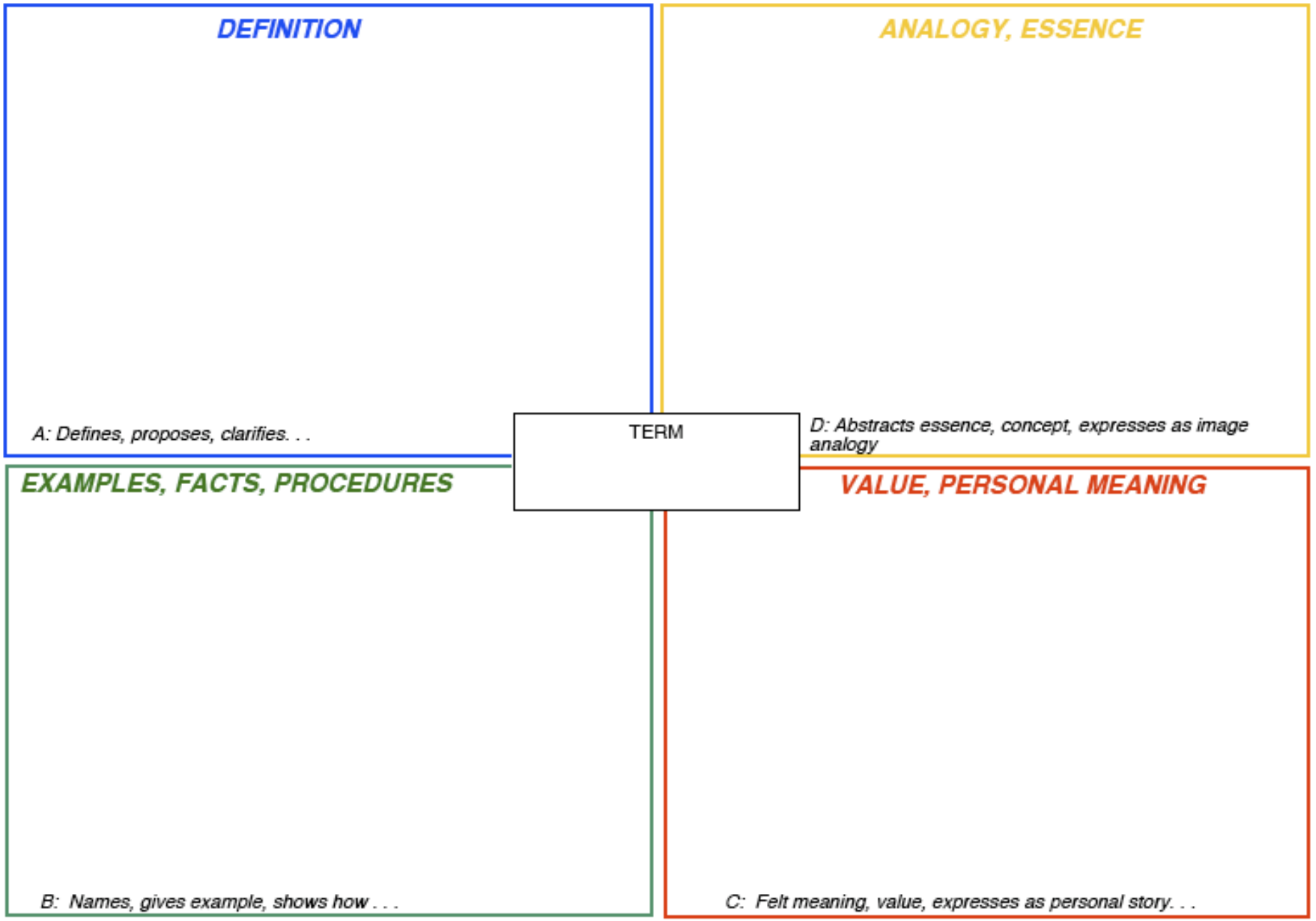
Developing deep knowledge about thinking

Strategies for thnking, learning

How do we process differently?

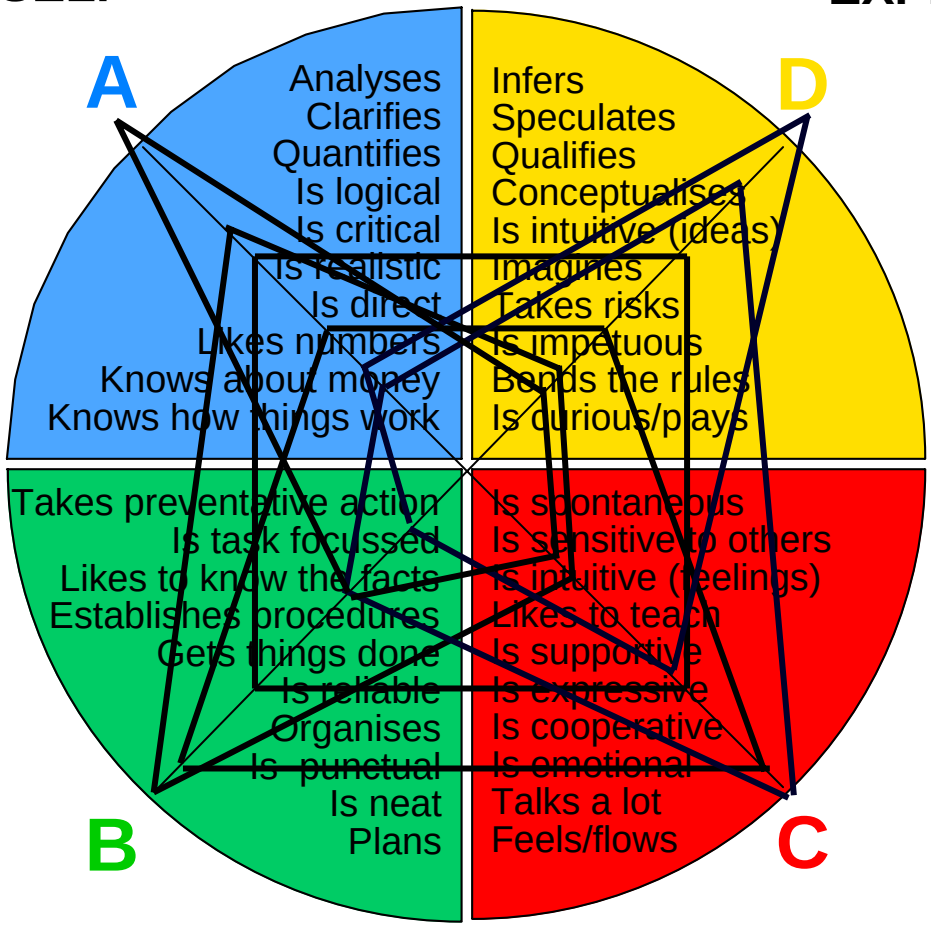
WORK PREFERENCES





RATIONAL, THEORETICAL SELF

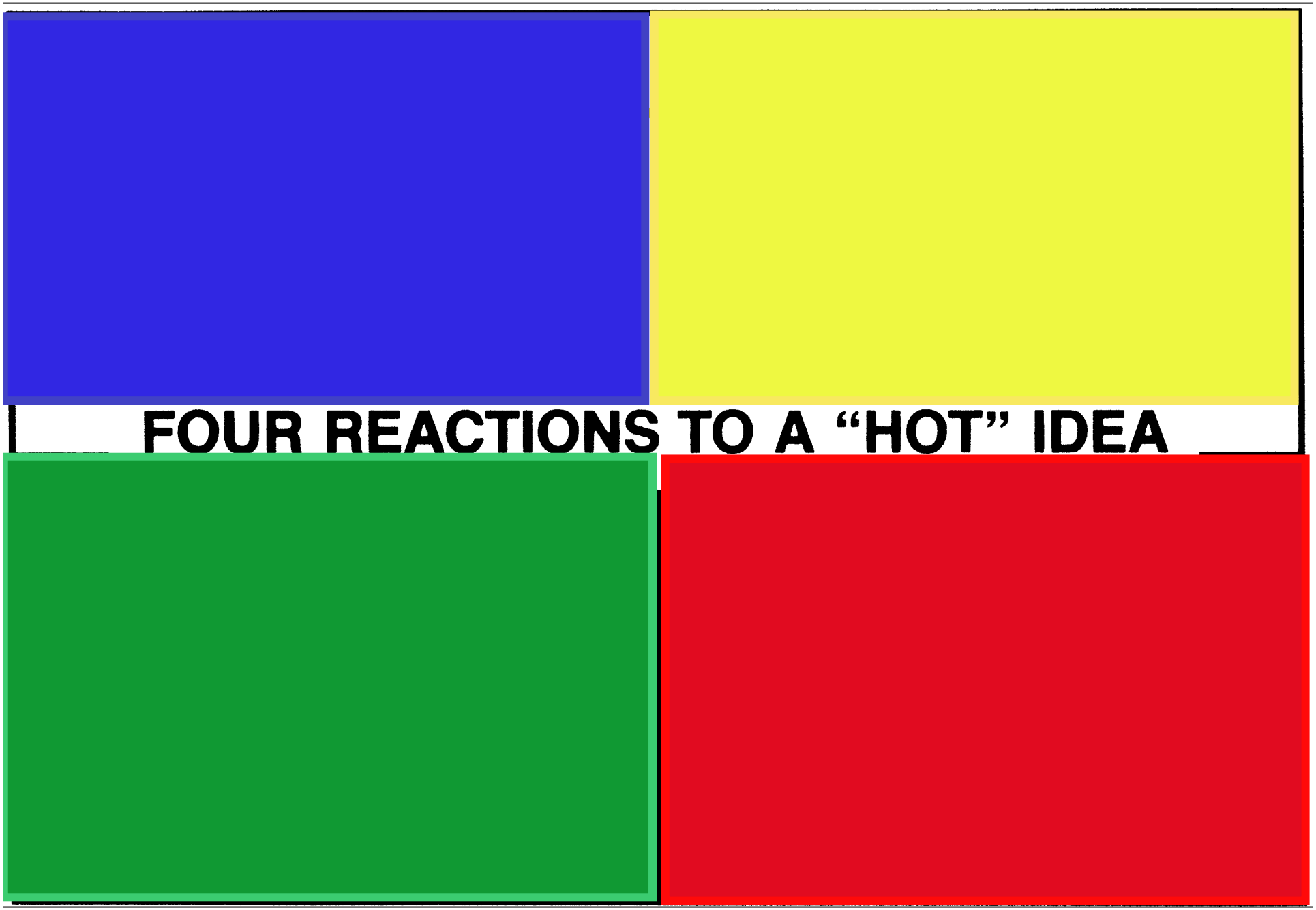
IMAGINATIVE, EXPERIMENTAL SELF



ORDERED, SAFEKEEPING SELF

EMOTIONAL, INTERPERSONAL SELF

FOUR REACTIONS TO A “HOT” IDEA

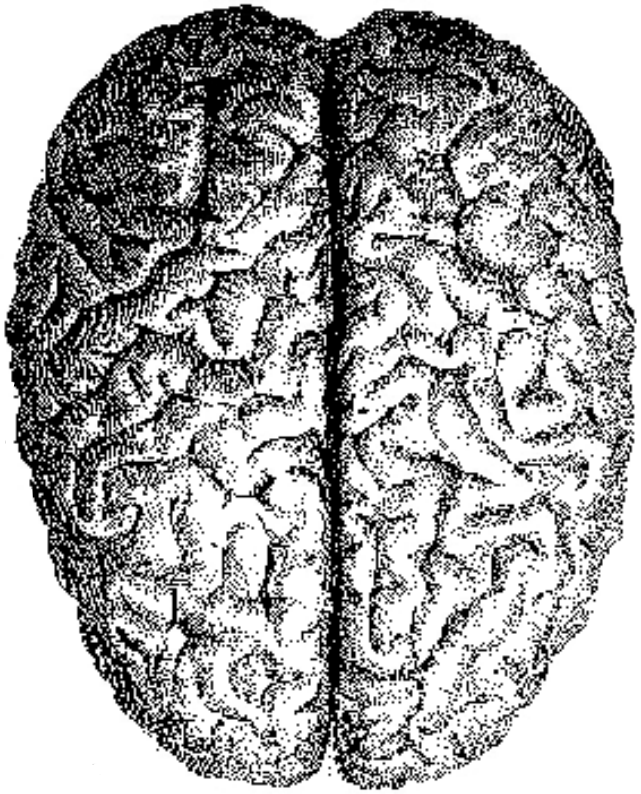


Languages or our brain/mind system….

Analytical

- abstract symbolic

  word, musical notation, x + y =3

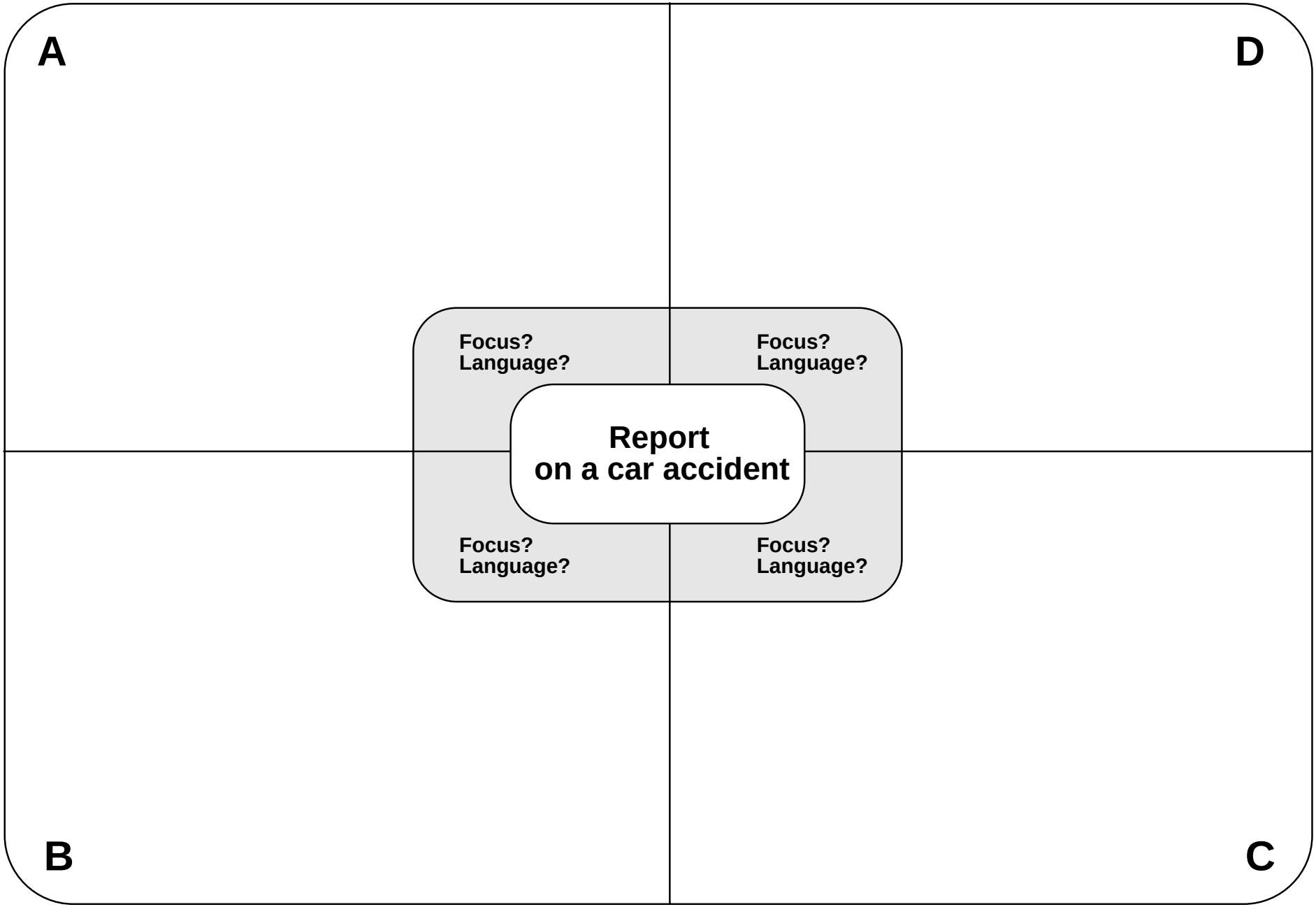


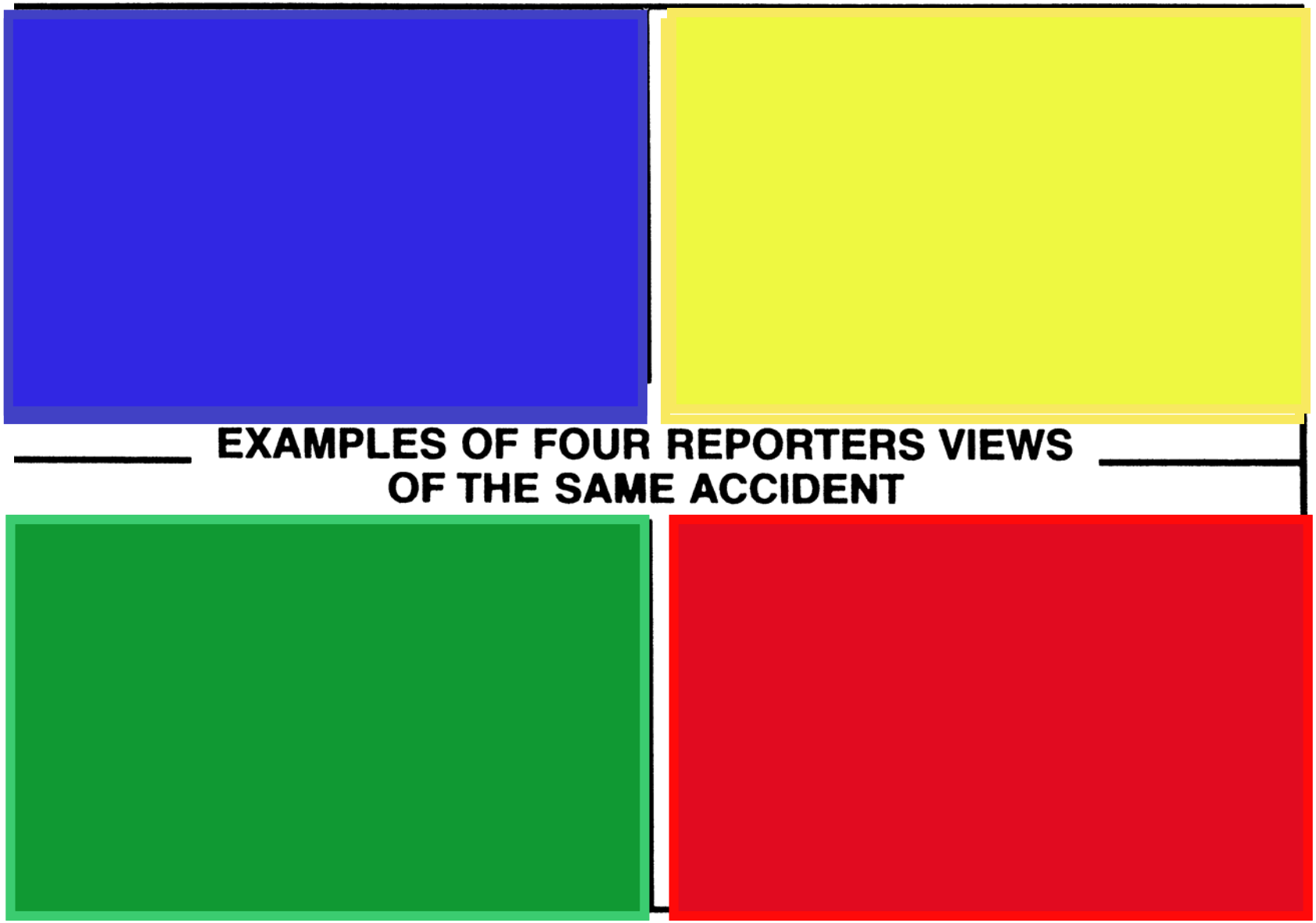
Holistic

- *image language*

LOFLTAOB

Particulate, linear	Global, random
• stepwise	• holistic
• analytical	• intuitive
• serial processor	• parallel processor

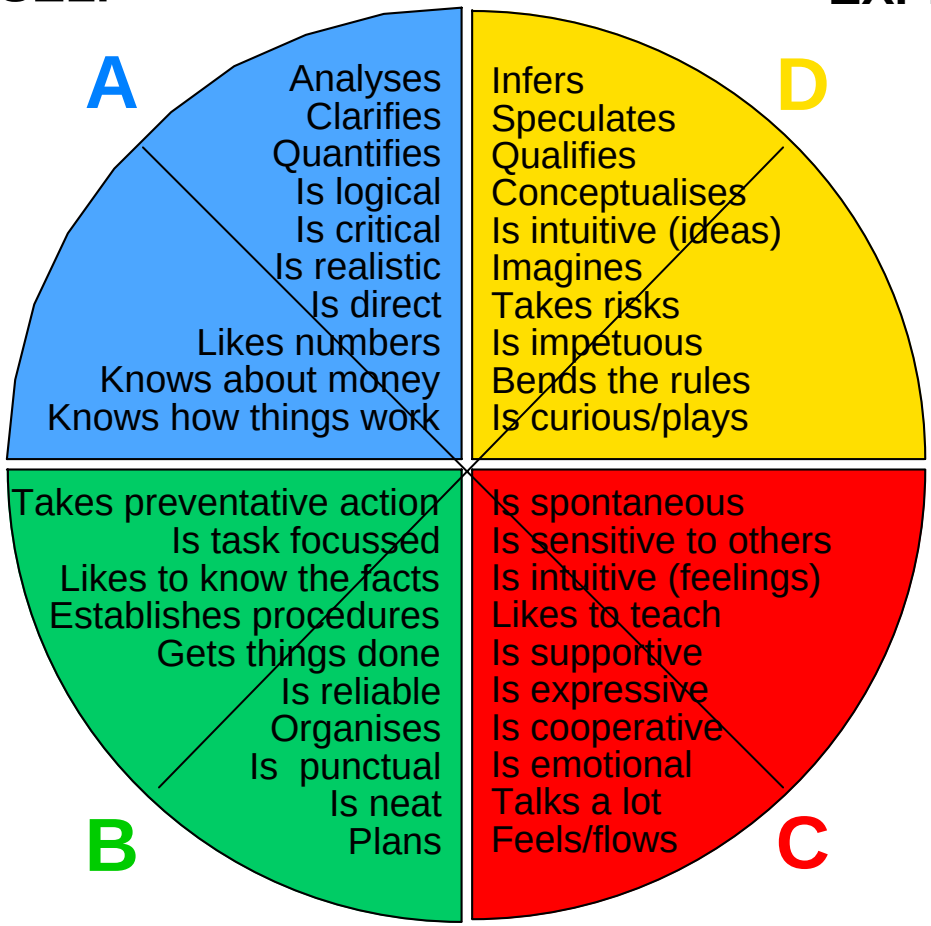




EXAMPLES OF FOUR REPORTERS VIEWS
OF THE SAME ACCIDENT

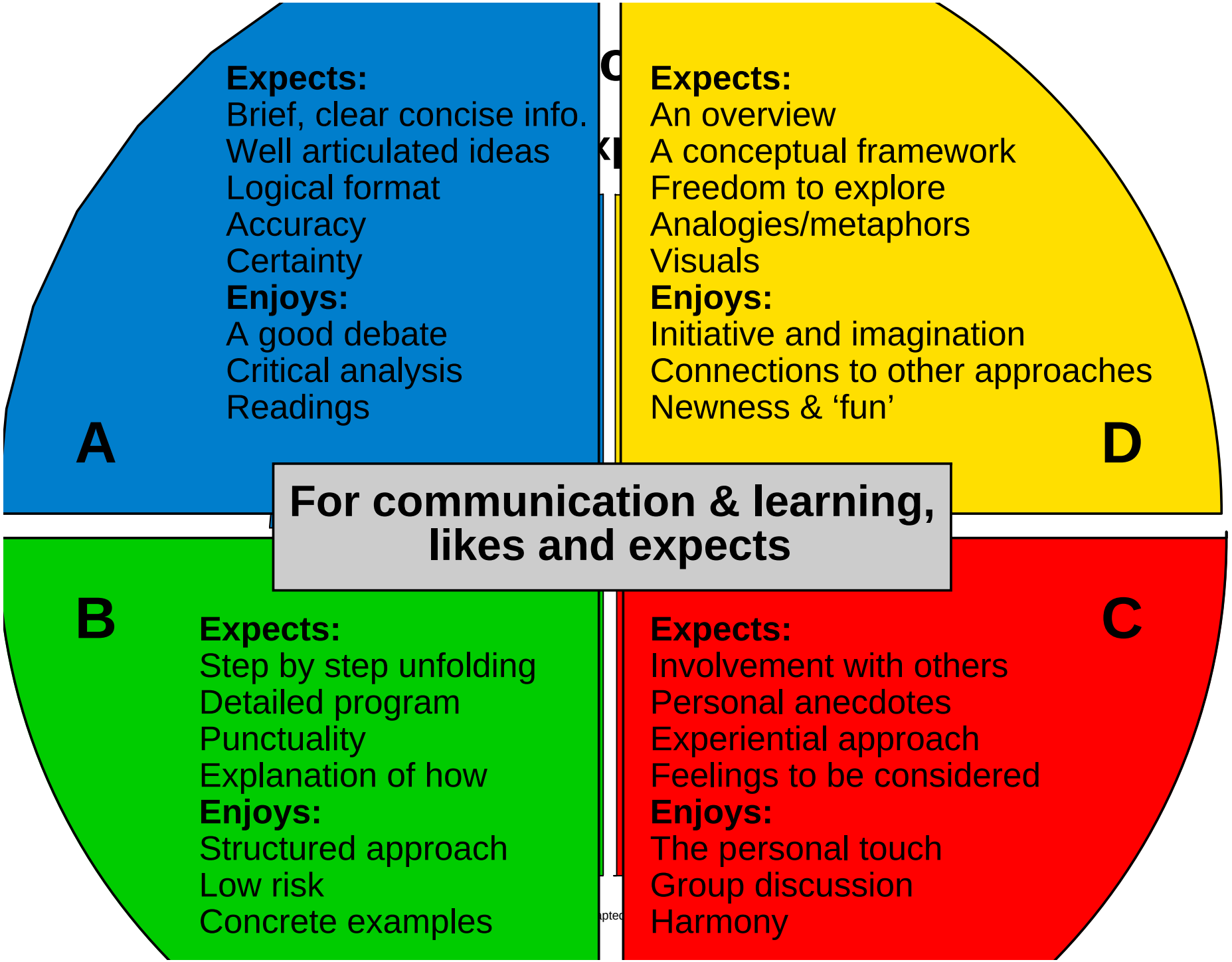
RATIONAL, THEORETICAL SELF

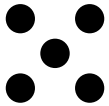
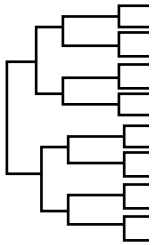
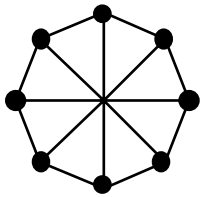
IMAGINATIVE, EXPERIMENTAL SELF



ORDERED, SAFEKEEPING SELF

EMOTIONAL, INTERPERSONAL SELF


A
Expects:
Brief, clear concise info.
Well articulated ideas
Logical format
Accuracy
Certainty
Enjoys:
A good debate
Critical analysis
Readings
D
Expects:
An overview
A conceptual framework
Freedom to explore
Analogies/metaphors
Visuals
Enjoys:
Initiative and imagination
Connections to other approaches
Newness & ‘fun’
For communication & learning, likes and expects
B
Expects:
Step by step unfolding
Detailed program
Punctuality
Explanation of how
Enjoys:
Structured approach
Low risk
Concrete examples
C
Expects:
Involvement with others
Personal anecdotes
Experiential approach
Feelings to be considered
Enjoys:
The personal touch
Group discussion
Harmony

Left mode		Right mode	
CAT	*Words*		*Images*
5 - five	*Symbols* *Numbers* *"Counts"*		*Patterns* *"Fiveness"* *"Estimates"*
	*SequentialLinear* *"Cause & effect"*		*Simultaneous* *Patterns Connections* *Integrated*

Adapted from *Teaching for the Two Sided Mind.* Linda Verlee

The whole is more than the sum of the parts.

The **multiplier effect NOT** an **additive effect.**

3 + 3 + 3 +3 = 12

whereas

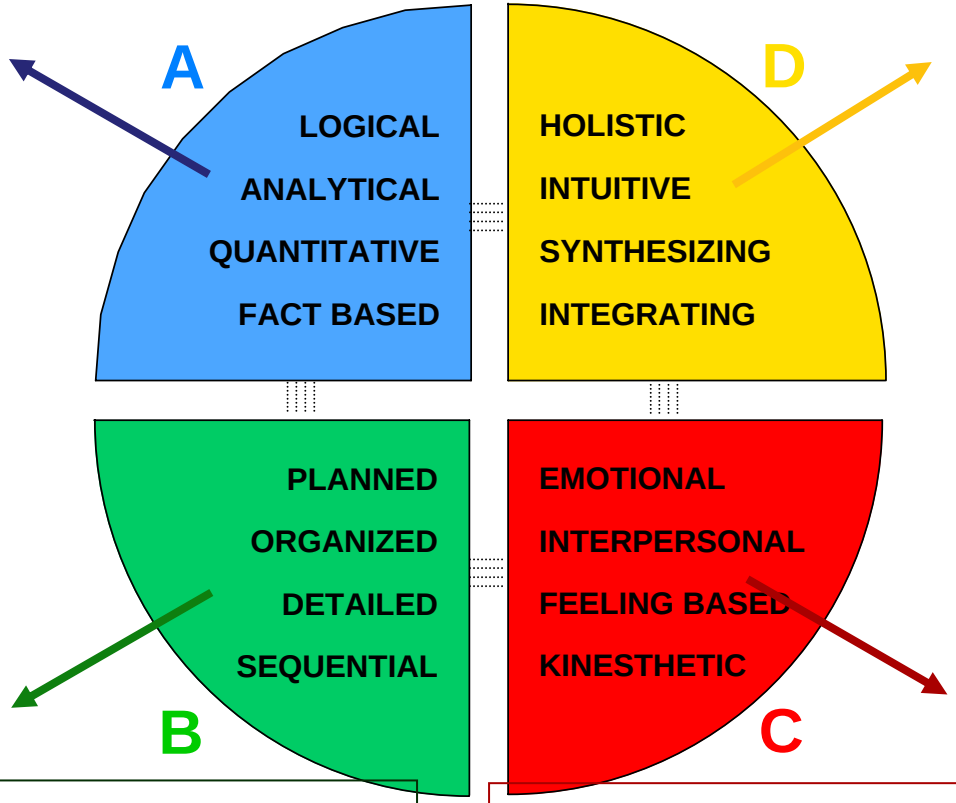
3 x 3 x 3 x 3 = 81!

Defines, clarifies, proves, states
PROPOSITIONAL KNOWLEDGE

KNOWS WHAT - KNOWS WHAT THEN

Grasps essence, meaning, pattern
CONCEPTUAL KNOWLEDGE

KNOWS WHY – KNOWS CONNECTIONS



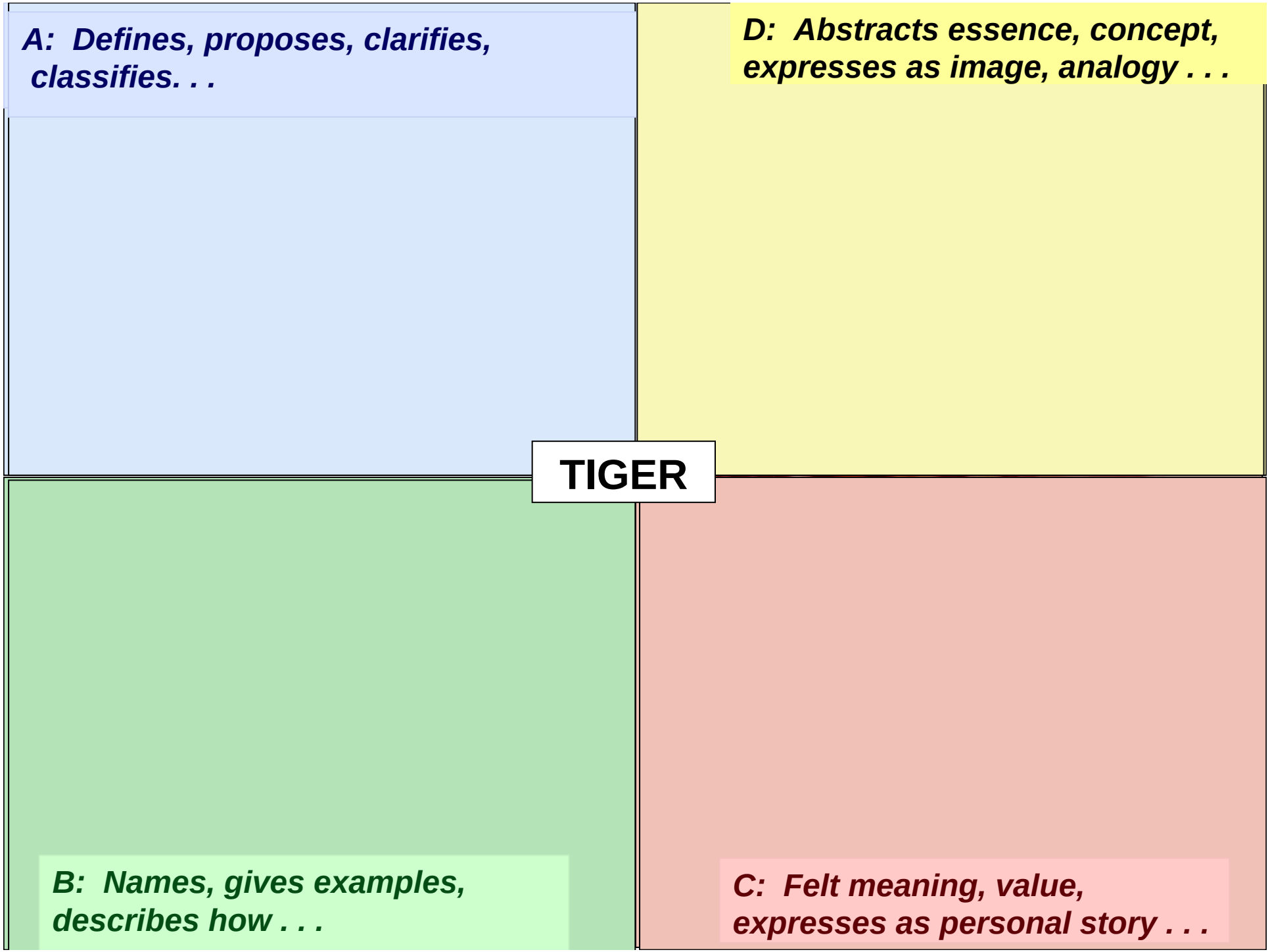
Facts, specific examples, procedures
FACTUAL, PROCEDURAL KNOWLEDGE

KNOWS THE FACTS – KNOWS HOW

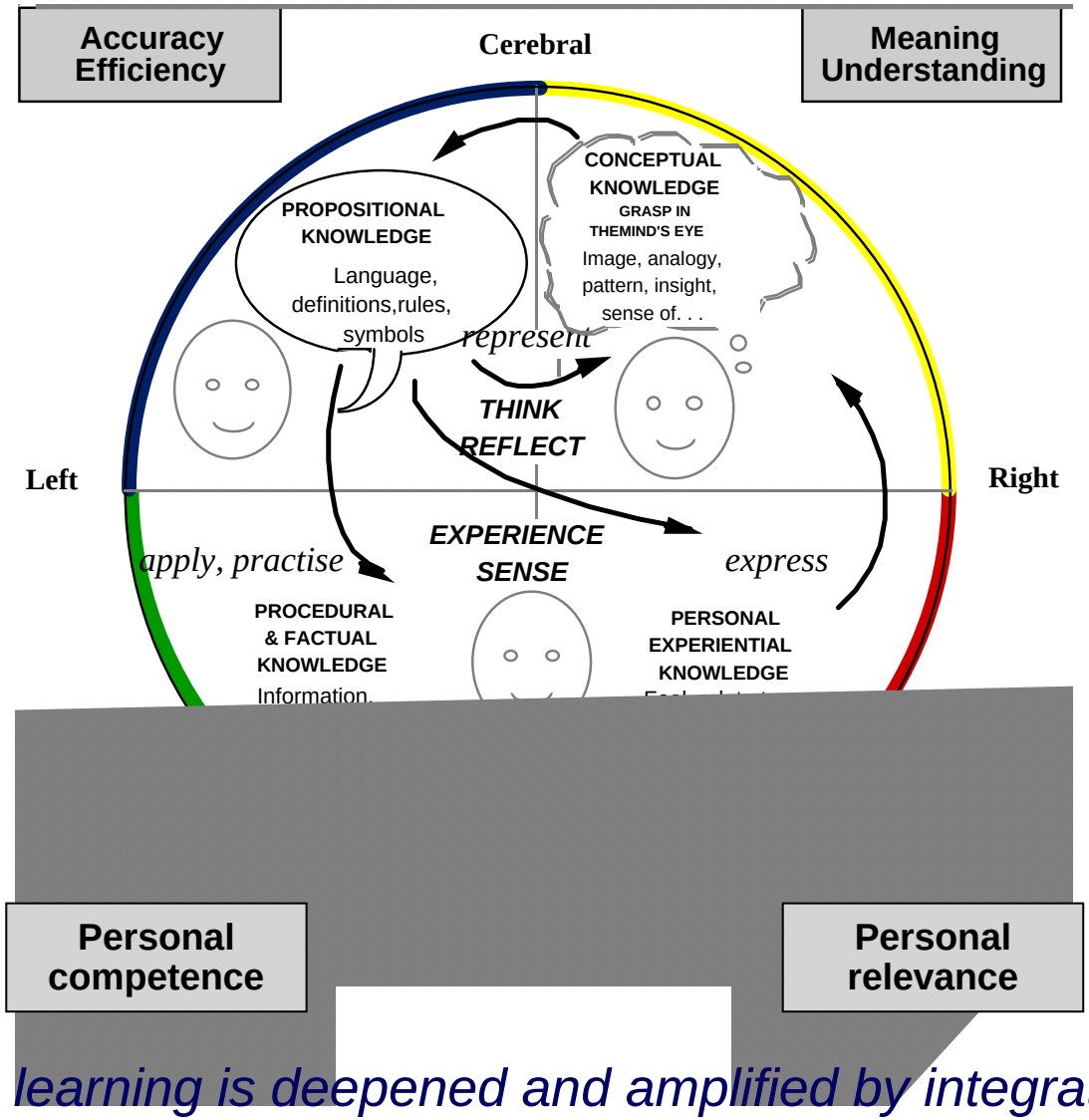
Experiences, stories, gut feelings,
PERSONAL STORY KNOWLEDGE

KNOWS RELEVANCE TO ME & OTHERS

Adapted from Herrmann, N. 1989, The Creative Brain, Brain Books


A: Defines, proposes, clarifies, classifies. . .
D: Abstracts essence, concept, expresses as image, analogy . . .
TIGER
B: Names, gives examples, describes how . . .
C: Felt meaning, value, expresses as personal story . . .

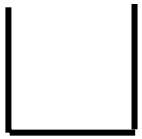
INTEGRAL LEARNING



Human learning is deepened and amplified by integrating our multiple ways of knowing.

Teach to ENGAGE and INTEGRATE all modes of processing regardless of personal thinking style.

 = a

 = b

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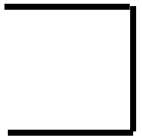
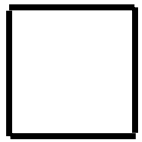
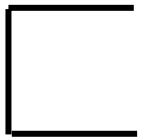
 = d

 = e

 = f

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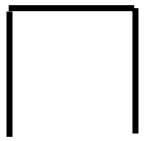
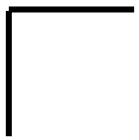
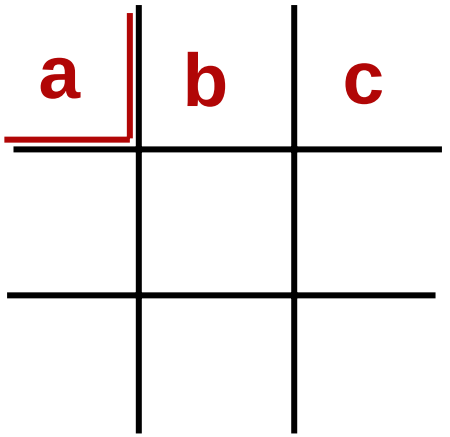
 = h

 = i



A chair is an object designed to support one person in a sitting position and it either has a back or is designed to support the back.

Categories of chairs:
Barber's chair
Dentisit's chair
Desk chair
Rocking chair
Squatter's chair

Essence of chair

Definition

Language is words and/or symbols

A

Concept

D *Language is image and metaphor*

WAYS OF KNOWING
"chair"

Language is facts and details such as labels, and description

B

Examples

This chair has four legs, it's made from Tassie oak. . .

Could also be instructions for building a chair

C *Language is personal story*

Experiences

My favourite chair is a "sleepy hollow"chair I bought in an old antique shop in Bendigo and then had done up. When I was a kid we had a sleepy hollow chair at home and it was everyone's favourite. Being one of six I didn't hold out much hope of ever owning that one so I bought my own.

STRUCTURE OF THIS SESSION

WHY the title?

Ways of thinking--> Ways of knowing

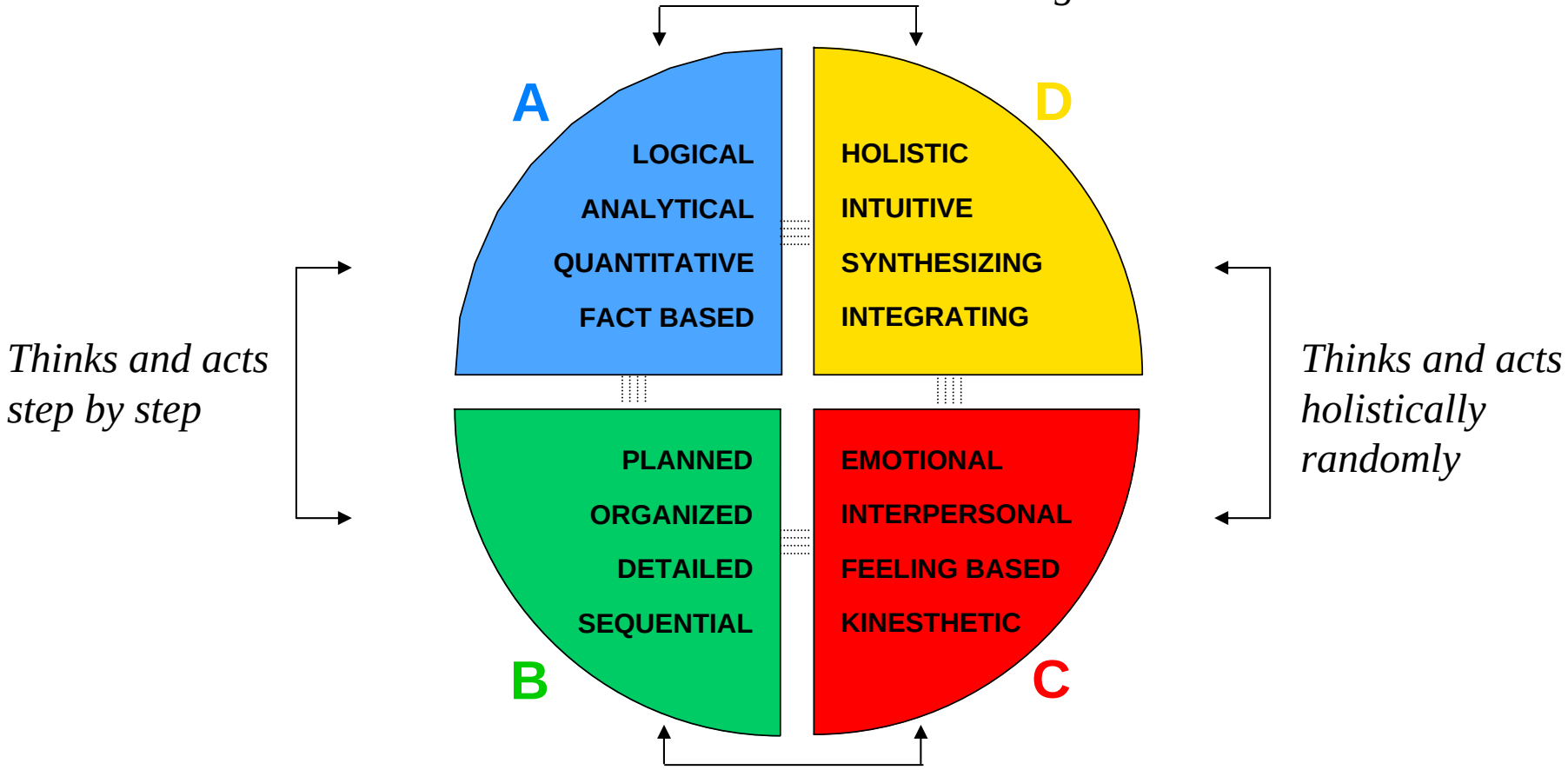
Integral Learning Model

Designing for Effective Learning

- **Mu dictionary -** Four ways of knowing
- **Strategies -** what strategies, experiences are needed for students to develop these ways of knowing

Ned Herrmann's Whole Brain Processing Model

Cerebral modes - abstract thinking



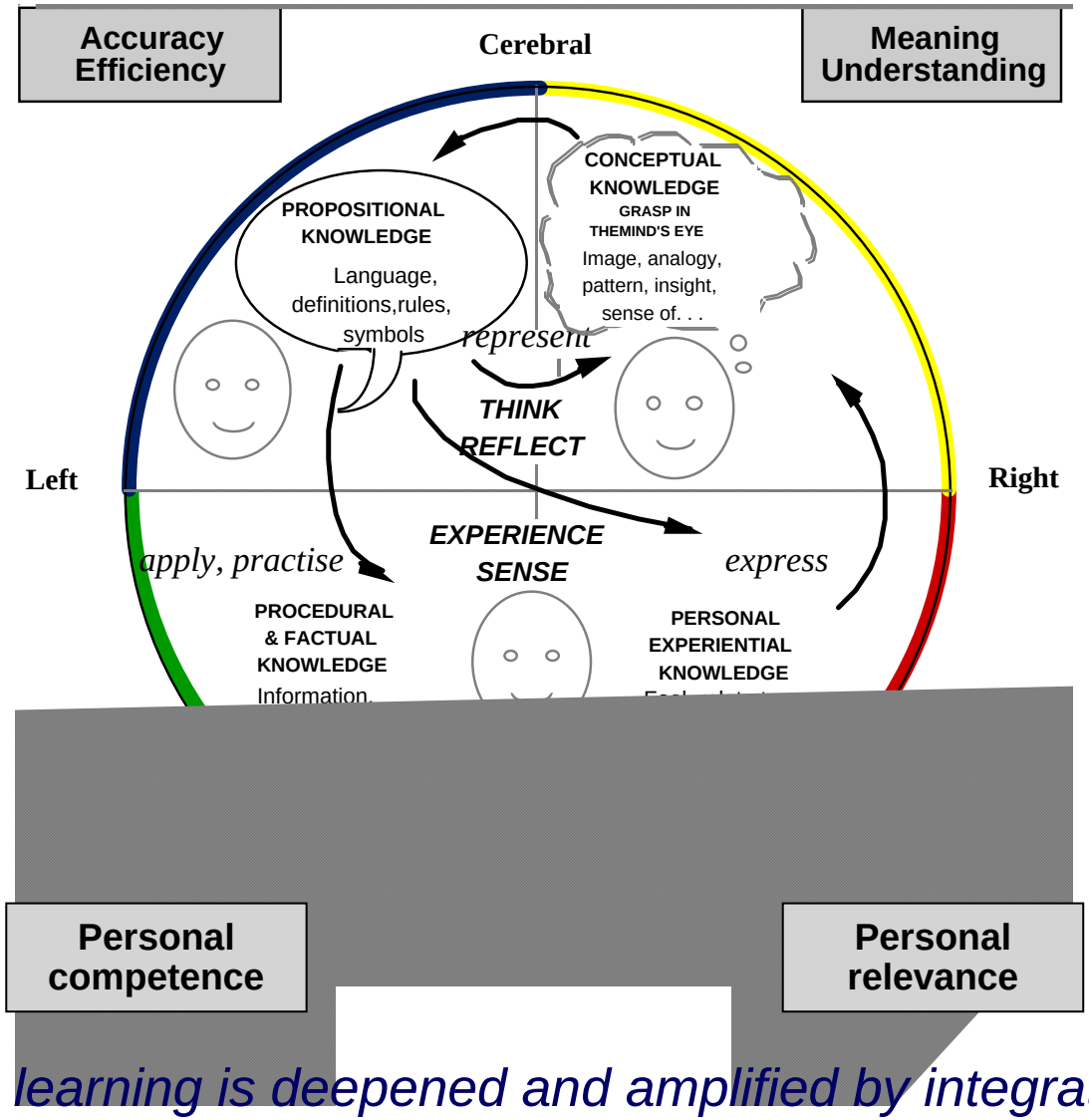
Thinks and acts step by step

Thinks and acts holistically randomly

Limbic modes - thinking stimulated by emotions and senses

Herrmann, N. 1989, The Creative Brain, Brain Books

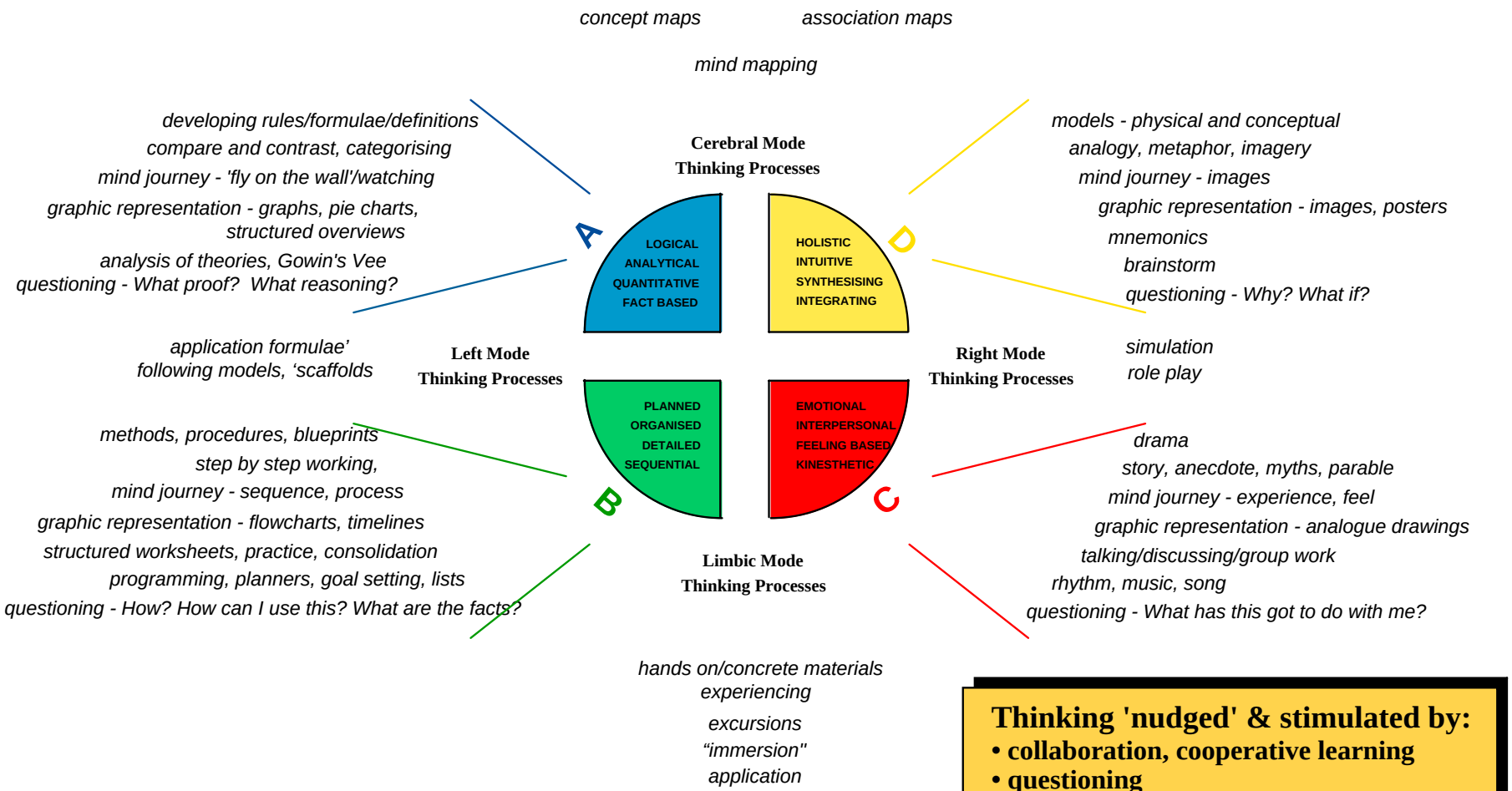
INTEGRAL LEARNING



Human learning is deepened and amplified by integrating our multiple ways of knowing.

Teach to ENGAGE and INTEGRATE all modes of processing regardless of personal thinking style.

Strategies to Promote Integral Learning



Thinking 'nudged' & stimulated by:

- **collaboration, cooperative learning**
- **questioning**
- **posing problems, challenges**
- **design process**
- **games**
- **predict -observe-explain**
- **teaching, re-presenting eg multimedia**

STRUCTURE OF THIS SESSION

Ways of thinking--> Ways of knowing

Integral Learning Model

Designing for Effective Learning

- **Mu dictionary -** Four ways of knowing
- **Strategies -** what strategies, experiences are needed for students to develop these ways of knowing

STRUCTURE OF THIS SESSION

WHY the title?

Ways of thinking--> Ways of knowing

Integral Learning Model

Designing for Effective Learning

Mu dictionary - Four ways of knowing

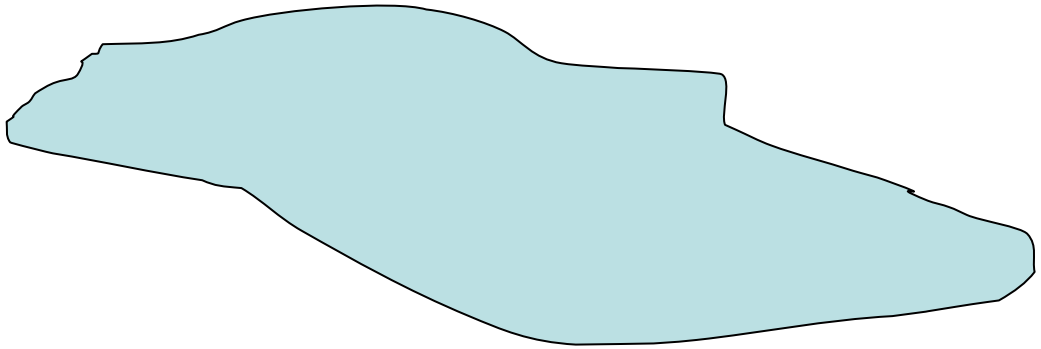
Strategies - what strategies, experiences are needed for students to develop these ways of knowing

Two students are discussing how they can determine the area of an irregular garden shape to order mulch.

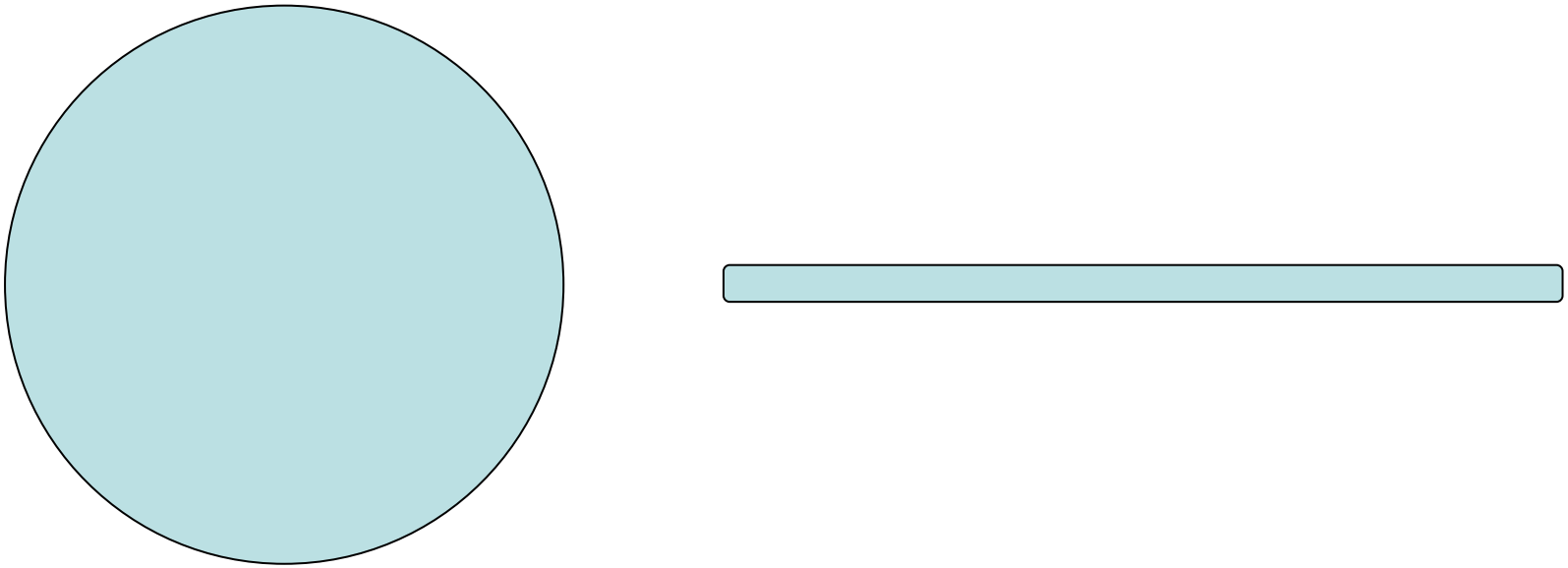
One suggests they could use a trundle wheel to determine the perimeter and then turn it into a regular shape and calculate the area. The other student isn't so sure that would work.

What do you think?

Prove your answer through **images** and **calculations**.

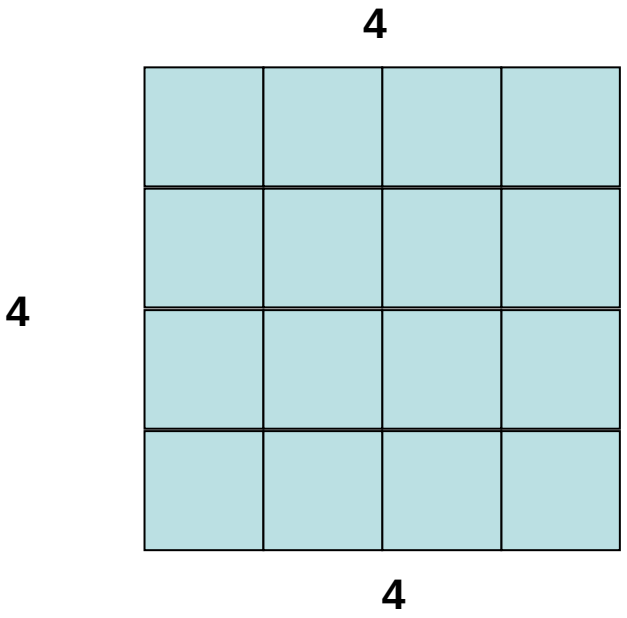


IMAGE

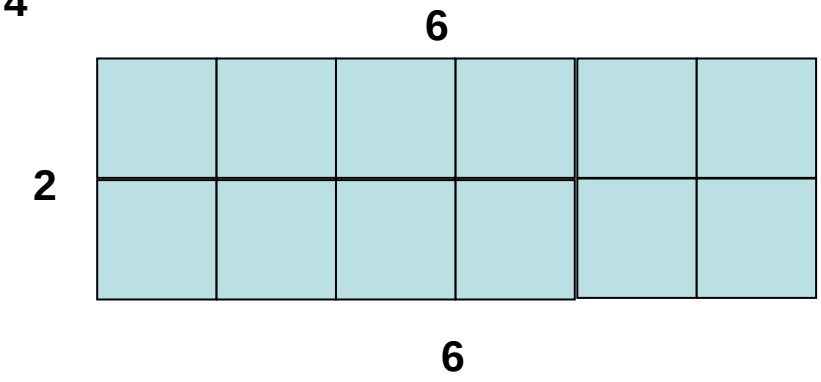


These two shapes have the same perimeter. Which has the greatest area?

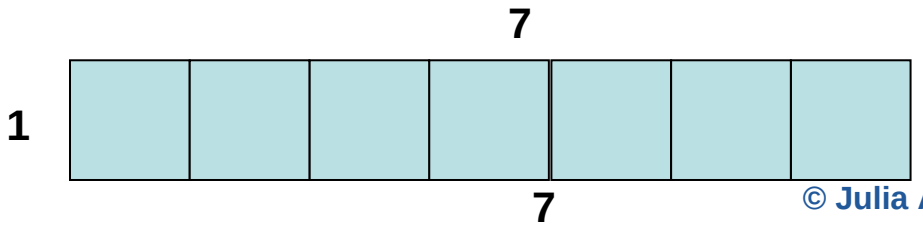
Proof: The perimeter is kept constant at 16. As the shape changes the area is changing. The first student is not correct.



P = 16
Area = 16



P = 16
Area = 12



P = 16
Area = 7