

# ANALYTICAL & CREATIVE THINKING SYNERGY

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Riga, Turiba Univerity, 13 August 2024























### **Business** card









Research and policy analysis

**Higher education** 

Mediation and conflict resolution

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### Structure of the workshop



How does thinking work?

How does analytical thinking work?

How does creative thinking work?

Practical task applying both types of thinking





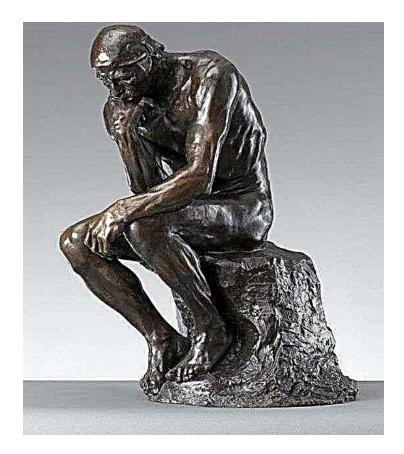
## How does thinking work?





### What is thinking?





Auguste Rodin «The Thinker» 1902

The affirmation of being human. *Cogito ergo sum.* I think, so I am (René Descartes, 1637)

The highest form of human psychic activity, the reflection of reality in the brain; reveals the most fundamental relations between objects and phenomena.

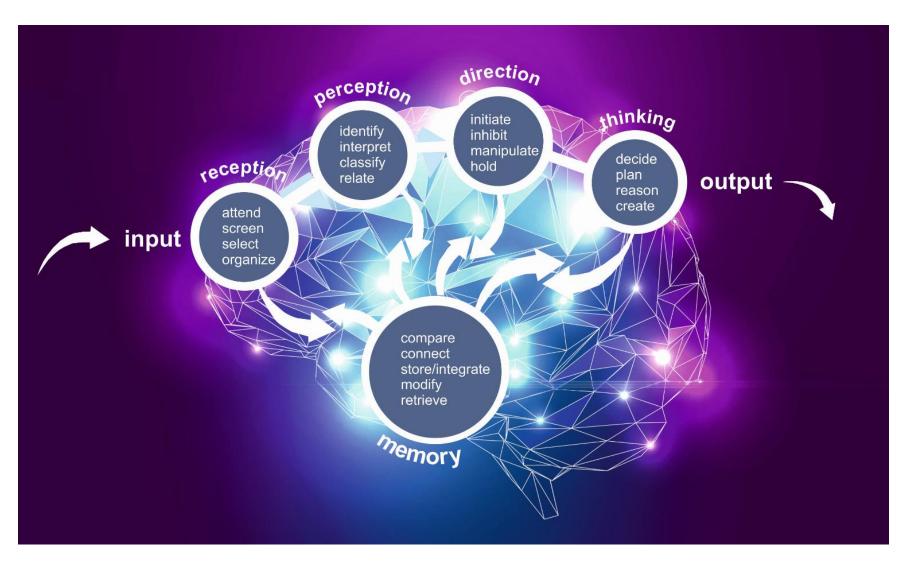
Thinking allows one to verify the **correspondence** of perceptions, concepts, judgements and conclusions **with reality**, gives **conscious purpose** to actions and assesses their **social significance**.

Thinking is inextricably linked to **language**: every thought exists in the form of words or other signs of information - numbers, formulae, diagrams, etc.



## Cognitive Skills

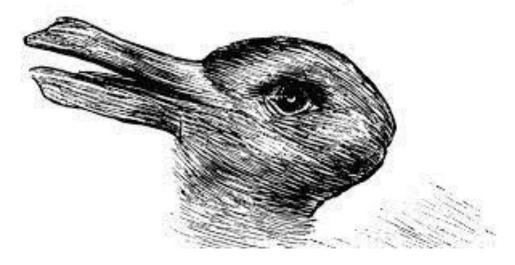


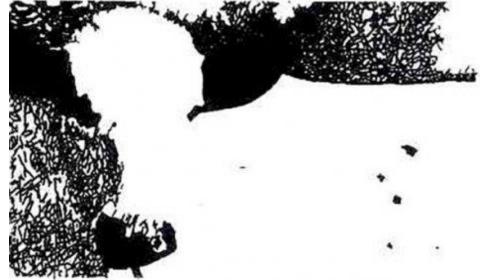














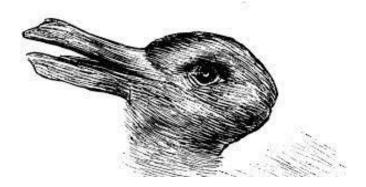


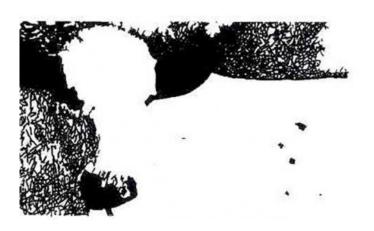


### Perception

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- Not objective, misleading
- Our knowledge, experience and physiology influence perception-
- The brain makes sense of stimuli coming into perception
- Fragment perception can lead to misjudgement
- Perceptual illusions can be manipulated
- Knowledge is needed to correct information that is not true
- Knowledge and experience underpin predictive perception







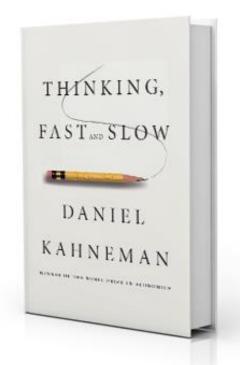
### Fast and Slow Thinking





A bat and a ball cost \$1.10 in total. The bat costs \$1 more than the ball. How much does the ball cost?

X:bat 
$$X + Y = 1.10$$
  $Y = 1.10$   $Y = 0.05$ 









### Fast and Slow Thinking

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### System 2 «Slow thinking»

Focuses on **effort-related mental activities**, including complex arithmetic.

Often associated with subjective experiences of means, choice and concentration.

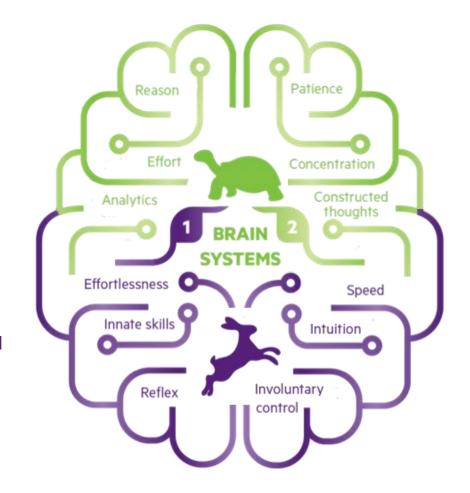
Arranges ideas and thoughts in a sequence of concrete steps.

### System 1 «Fast thinking»

Works automatically and quickly, with little or no effort and no conscious sense of control.

Effortlessly generates impressions and emotions, which are the main source of beliefs and choices for System 2.

Generates **spontaneous ideas**, free-flowing impulses and **associations** 









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# How does analytical thinking work?







### **Analytical Thinking**

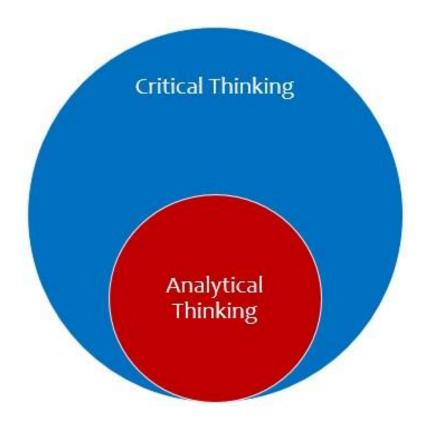
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Ability to analyse cause and effect. Draw appropriate conclusions. Choose priorities.

Key words: knowledge, experience, recognition of causal relationships.

Searching for, investigating and organising new information. Conclusion based on the data obtained.

Analytical thinking requires facts, detailed research, the ability to compare data and the ability to draw conclusions.









## **Analytical Thinking**



Logic

Objective

Concise

Rational

Focused

Deductive

Linear

Convergent

Systematic

























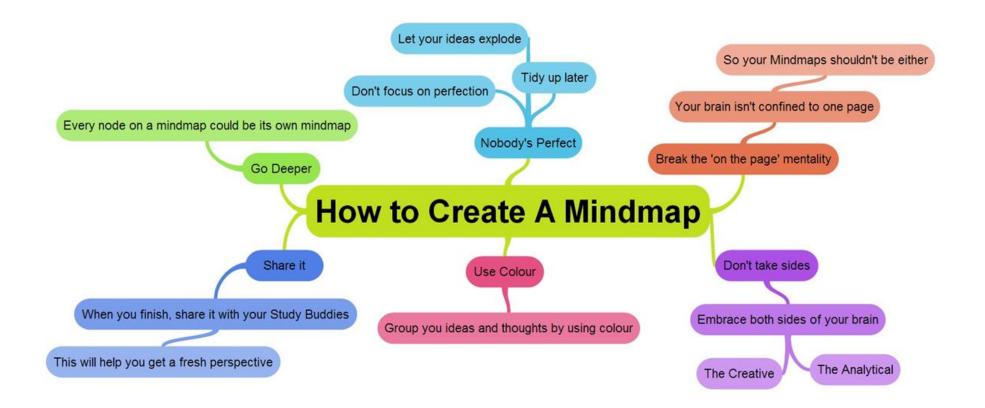






### Mindmap for Structuring Thinking Process











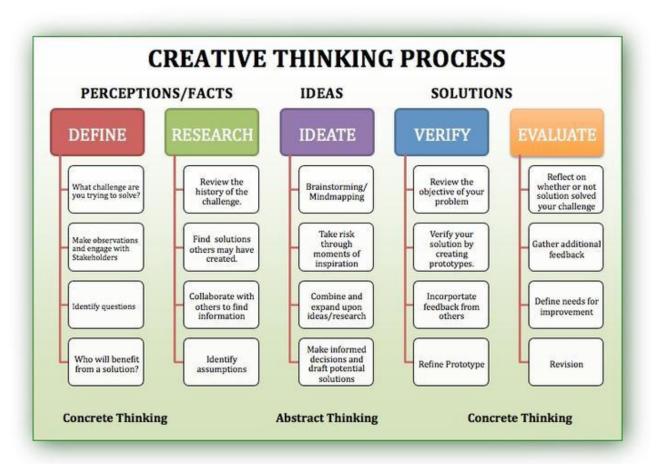
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# How does creative thinking work?



### **Creative Thinking Process**





- Ask questions
- Give ideas
- Make assumptions
- Think outside the box
- Create associations
- Giving more than one answer to each question

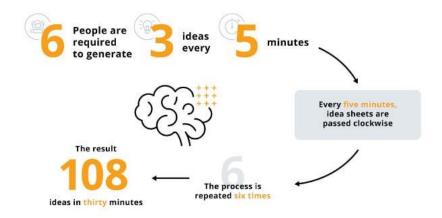


Source: https://www.dragon1.com/images/creative-thinking.jpg

### **Creative Thinking Techniques**



### **Brainwriting for your business**







### **Six Thinking Hats**® Quick Summary



### **Blue Hat - Process**

Thinking about thinking. What thinking is needed? Organizing the thinking. Planning for action.



#### White Hat - Facts

Information and data.
Neutral and objective.
What do I know?
What do I need to find out?
How will I get the information I need?



#### Red Hat - Feelings

Intuition, hunches, gut instinct. My feelings right now. Feelings can change. No reasons are given.



#### **Green Hat - Creativity**

Ideas, alternatives, possibilities. Provocations - "PO". Solutions to black hat problems.



#### Yellow Hat - Benefits

Positives, plus points. Logical reasons are given. Why an idea is useful.



#### **Black Hat - Cautions**

Difficulties, weaknesses, dangers. Logical reasons are given. Spotting the risks.

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## Group work «Community challenges»



### Structure of the group work



Identify a community challenge

Analytical discussion

Creative solution brainstorming

Presentation





## THANK YOU FOR YOUR COOPERATIVE ATTITUDE!

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