



ВИВЧАЙ ТА РОЗРІЗНЯЙ:
інфо-медійна грамотність



МІНІСТЕРСТВО
ОСВІТИ І НАУКИ
УКРАЇНИ



Посольство
Великої Британії
в Україні



Info-media literacy and critical thinking

Lecture 1. Critical thinking as the basic skill of the 21st century

2.09.2024





Outline

1. Information era and thinking styles.
2. Critical thinking: definition, characteristics, and principles.
3. Principles of cognition. Bloom's Taxonomy.
4. How to improve critical thinking skills.





Basic skills of the 21st century

Learning Skills



critical thinking



creativity



collaboration



communication

Literacy Skills



information



media



technology

Life Skills



flexibility



leadership



initiative



productivity



social skills





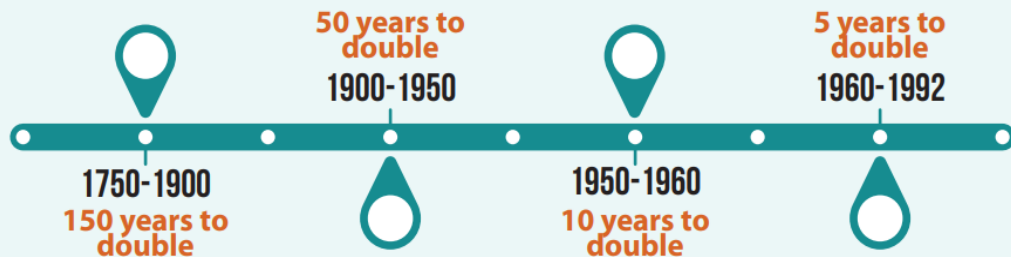
Information avalanche

AVALANCHE OF INFORMATION

Since 2010 we have been living in a situation where the number of devices connected to the network exceeds number of people on the planet

Source Cisco IBSG 2011, Cisco VINI 2012

Knowledge doubling



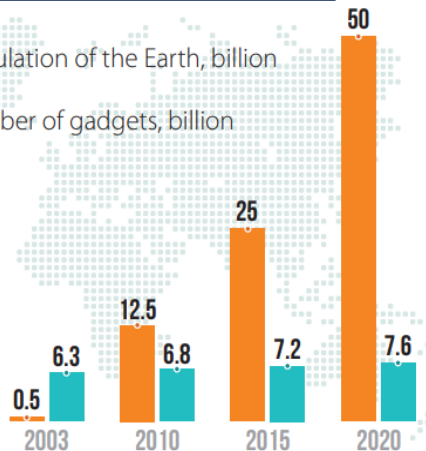
In 2020, the information was doubled every 73 days



population of the Earth, billion



number of gadgets, billion





Thinking styles

Thinking is a conscious cognitive process involving analysis, synthesis, problem-solving, decision-making, and critical evaluation, allowing individuals to manipulate mental representations (R.T.V. Pacheco, 2024).





“Sponge” and “Panning for Gold” thinking styles

Two Thinking Styles: Sponge

▪ Sponge—absorbing

- Knowledge acquisition

- First step in gaining knowledge of a new area to understand issues and complexities of that area.

- Passive absorption of information

- Memorizing information rather than evaluating



Panning-for- Gold

▪ Panning-for-gold: ask critical questions

- Interact with knowledge as it is acquired

- Read with a question-asking attitude to evaluate the truth of the information.





Cognition

- ❖ Cognition = knowledge acquisition.
- ❖ A mental activity of internal coding and structuring of information by a learner.
- ❖ Cognition encompasses the processes of perception, knowledge, problem solving, judgment, language, and memory.
- ❖ How we integrate, organize, and utilize our conscious cognitive experiences without being aware of all of the unconscious work of the brain.





Principles of cognition

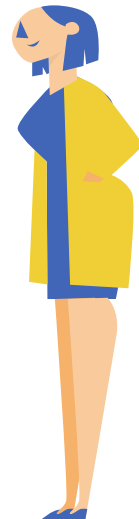
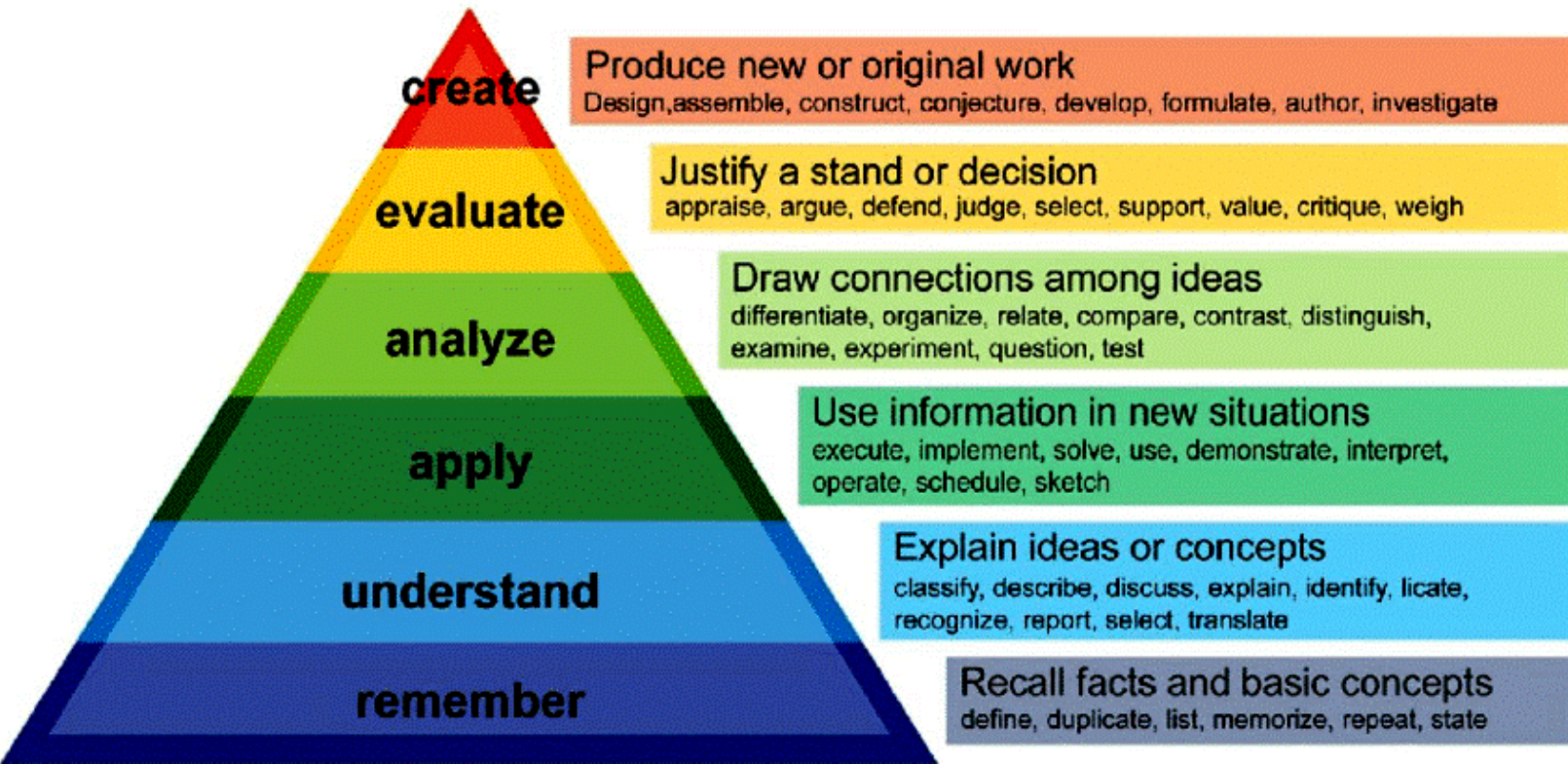
The **5 principles of cognition** are:

- 1/ The prior experiences of the learner are important to their learning.
- 2/ Learners use cognition to understand their current experiences.
- 3/ By using cognition to understand their experiences, learners construct knowledge.
- 4/ Learners construct knowledge based on their existing knowledge and depending on social setting.
- 5/ Learning is more efficient via practice and cooperation.



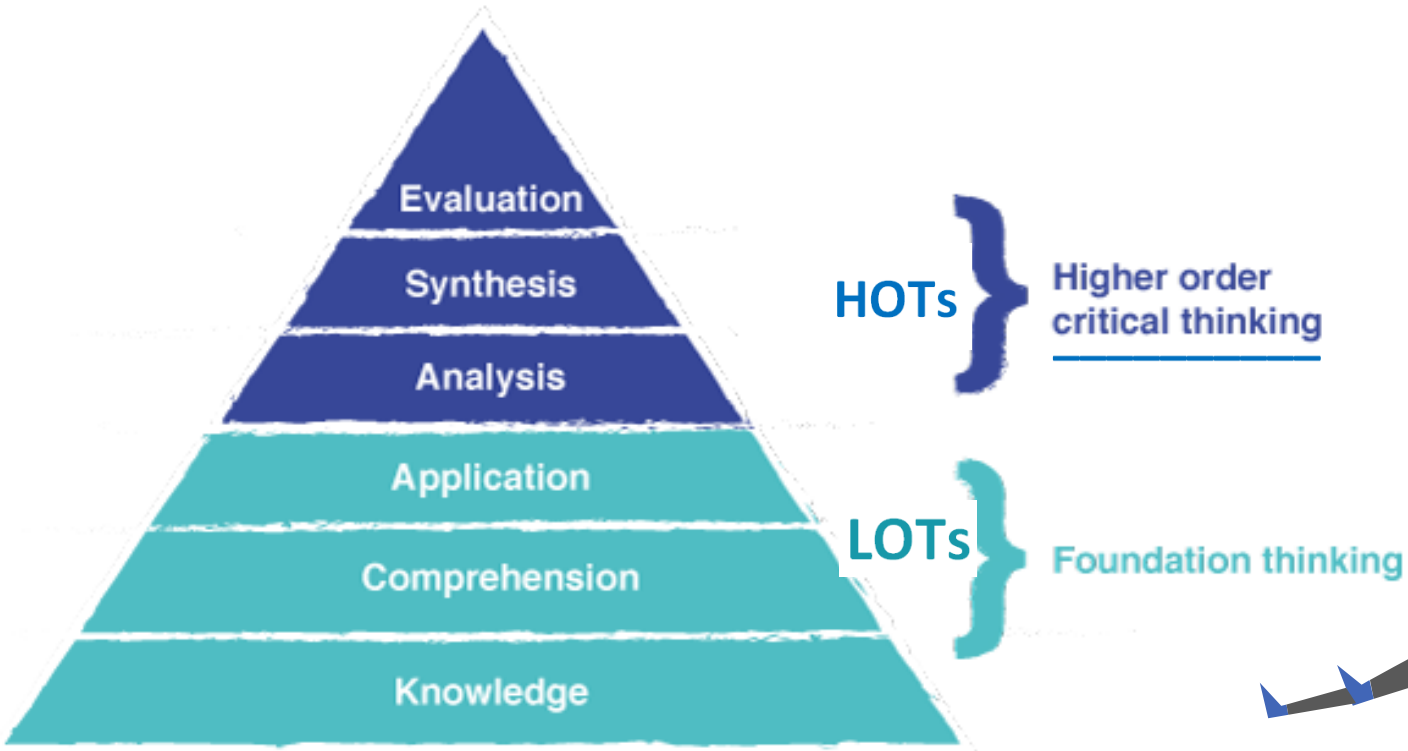


Bloom's Taxonomy of thinking skills



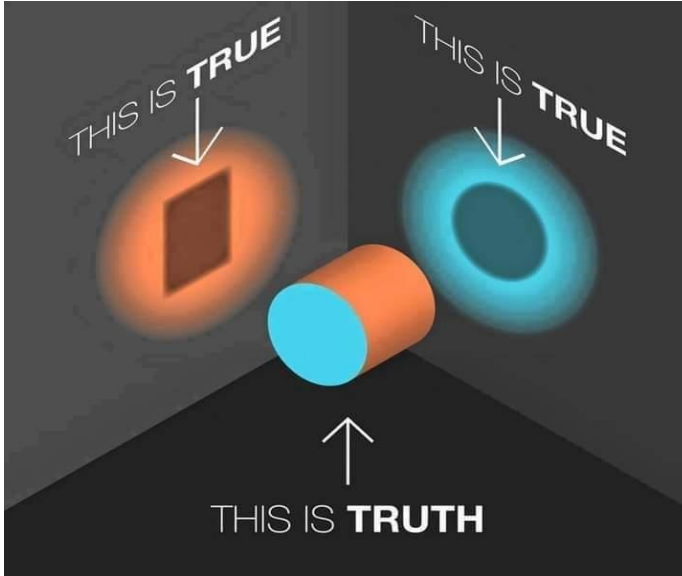


Levels of thinking





Video: What is critical thinking



Why is it important nowadays? Where can we use it?



What is critical thinking?

Critical thinking is the ability to engage in reflective and independent thinking.

M. Lipman (1988): Critical thinking is skillful, responsible thinking. It is sensitive to context, relies on criteria, and is self-correcting.

M. Scriven, R. Paul (2003): The intellectually disciplined process of actively and skillfully conceptualizing, applying, analyzing, synthesizing and evaluating information to reach a conclusion.

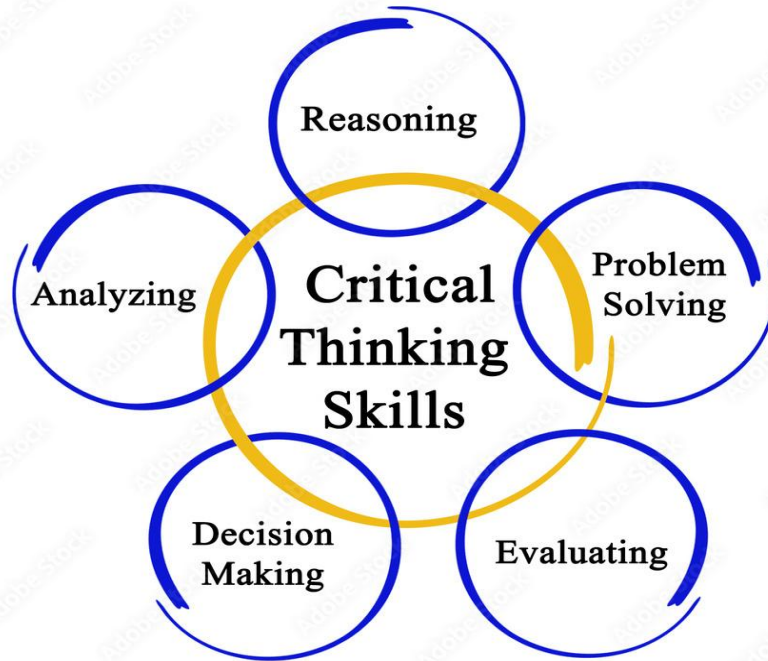
Attributes of critical thinkers:

Rational, logical, open-minded, ask right (“powerful”) questions.



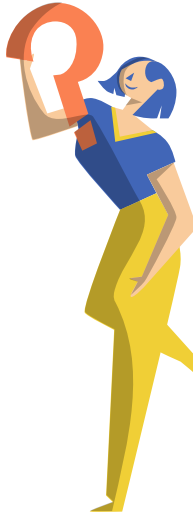


Critical thinking skills





Why is it important nowadays?





Principles of critical thinking

1. Gather the most complete information.
2. Differentiate between facts and opinions.
3. Question the source of facts.
4. Question the ways and methods by which the facts were gathered.
5. Look for hidden assumptions and biases.
6. Understand your own biases and values.
7. Question conclusions based on the available information.
8. Never expect all of the answers.
9. Examine the big picture.
10. Examine multiple causes and effects.

(prof. Larry Larson, Ohio State University)





Obstacles to critical thinking

1. Lack of rational thinking practice.
2. Personal biases.
3. Borrowed opinion.
4. Intellectual laziness.

How can we overcome these obstacles?





Video: 5 tips to improve your critical thinking



How can we train our critical thinking skills?



How to improve critical thinking skills

1. Formulate your questions.
2. Gather your information.
3. Analyze the implications.
4. Consider cause-effect correlation.
5. Evaluate the validity of sources.
6. Diversify the sources.
7. Explore other points of view.
8. Apply the information.





Thank you for attention!

