LECTURE 2
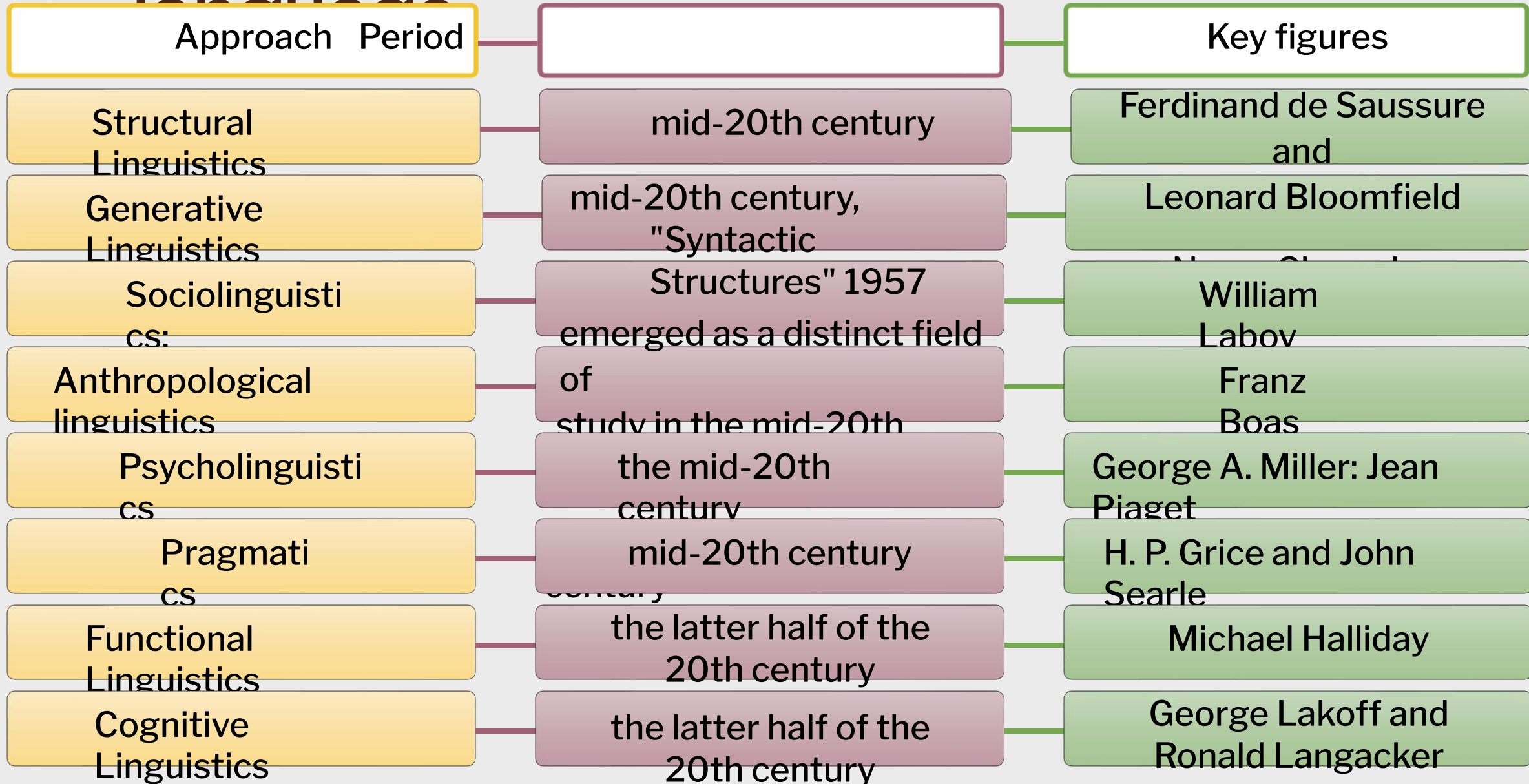
APPROACHES TO STUDY OF THE LANGUAGE

1 Cognitive Theory in Language Learning: Cognitive Theory; Cognitive Method in Language Learning;

2 Cognitive Activities.

3 Cognitive Tools: Learning with Technology: Dynamic modeling tools; Semantic organization tools; Socially shared cognitive tools; Knowledge

Approaches   to the study of language

Approach Period		Key figures
Structural Linguistics	mid-20th century	Ferdinand de Saussure and
Generative Linguistics	mid-20th century, "Syntactic Structures" 1957	Leonard Bloomfield
Sociolinguistics:	emerged as a distinct field of study in the mid-20th	William Labov
Anthropological linguistics		Franz Boas
Psycholinguistics	the mid-20th century	George A. Miller: Jean Piaget
Pragmatics	mid-20th century	H. P. Grice and John Searle
Functional Linguistics	the latter half of the 20th century	Michael Halliday
Cognitive Linguistics	the latter half of the 20th century	George Lakoff and Ronald Langacker

Cognitive approach

- What is the aim of cognitive approach?

- What are 3 main assumptions in cognitive approach?

- What is SCHEMA?

- What are 3 types of schema?

- What are schematic processes? How do assimilation and accommodation happen?
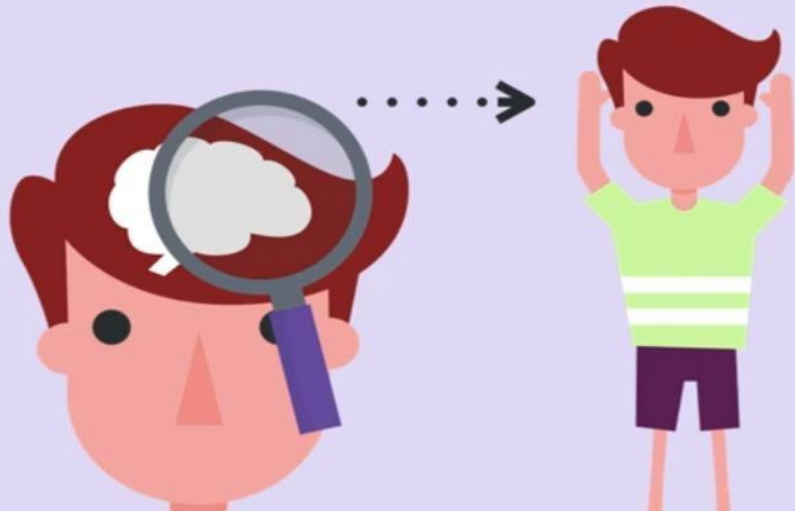
- What is Bartlett experiment about (1932)?

What is the aim of cognitive approach?

Principles of the Cognitive Approach

The Cognitive Approach — Opposites — **The Learning Approach**

Focuses on how the **internal mind** works to influence behaviour

Focuses on **observable, external behaviour**

Just the physical behaviour and reactions

What are 3 main assumptions in cognitive

Principles of the Cognitive Approach

Three Assumptions

Limited Capacity

Our minds can only process a fixed amount of information at once

That info can be spread over multiple tasks

10%

Control Mechanism

There is an area of the mind that has superior processing power

It can control activity in other areas of the brain

Two-way Flow

The mind takes info from the environment

Input flow

Once it's processed, produces a behavioural reaction

Output flow

Information

Reaction

What is SCHEMA?

Schema ⟶ The first substantive cognitive assumption

What is it?

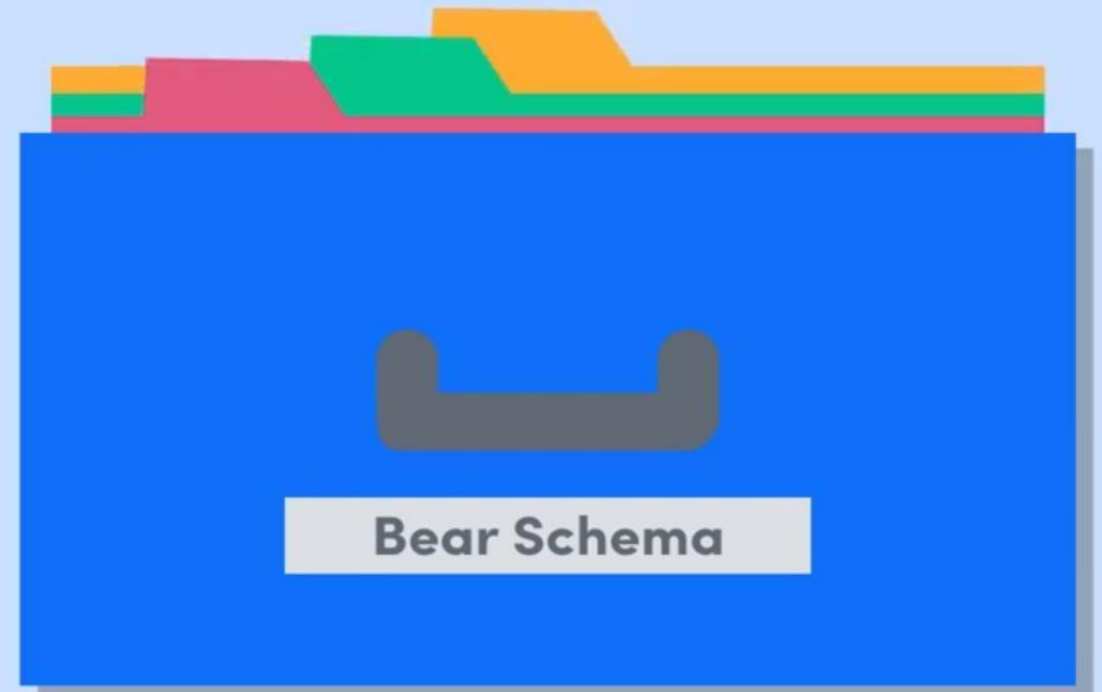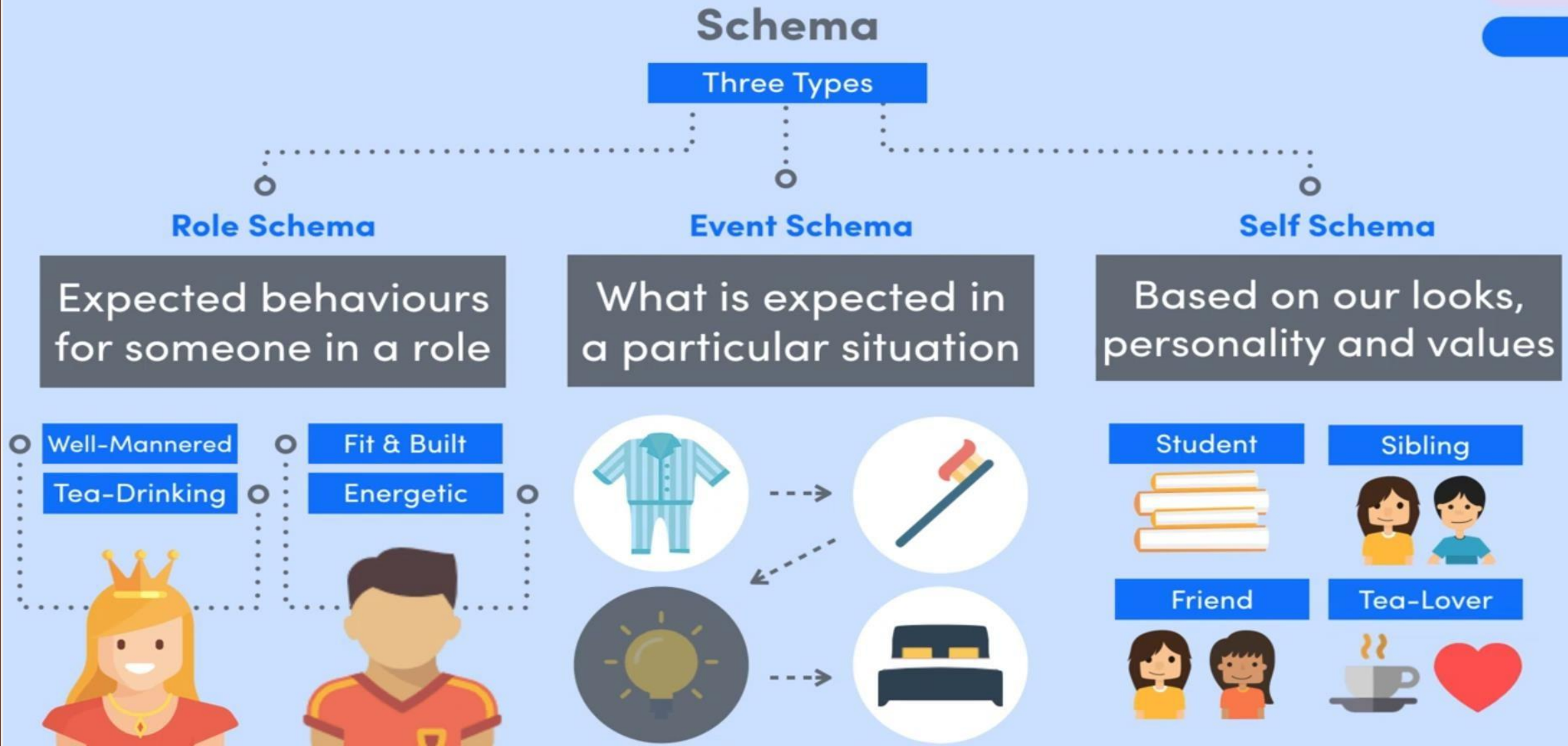**?** We create a 'schema' to organise and interpret information about different experiences

? This information lets us predict future possibilities

What is SCHEMA?

Bear Schema

What are 3 types of schema?

What are schematic processes? How do assimilation and accommodation happen?

What is Bartlett experiment about (1932)? What are the results?

Bartlett (1932)

Schematic Processes

Would existing schema affect someone's memory of an unusual event?

- After varying amounts of time, the participants were asked to repeat the storyback to Bartlett.

British Participants

The Results:

- Participants tended to change the story to fit their own schema
- The longer the time delay, the more stories showed the impact of individual schema

Cognitivism

Cognitive Approach:

- The cognitive approach is a broader perspective or orientation within psychology and other fields.

-The cognitive approach emphasizes the study of internal mental representations, information processing, and how individuals perceive, organize, store, and use information.

- It is not limited to a specific theory or school of thought but includes a range of theories, including cognitive psychology, cognitive neuroscience, cognitive development, and more.

- The cognitive approach can be applied to various domains, including education, clinical psychology, artificial intelligence, and human-computer interaction.

Cognitivism:

- Cognitivism is a specific theoretical perspective within the broader cognitive approach.

- Cognitivism is often associated with key concepts such as schemas, memory systems, problem-solving strategies, and information encoding, retrieval, and manipulation.

- It has had a significant impact on psychology, education, and related fields, leading to the development of cognitive psychology as a distinct subfield.

- Cognitivism is primarily concerned with explaining how mental processes work and how they influence behavior and learning.

COGNITIVISM

- "COGNITIVE REVOLUTION" 1950S

- FACTORS INFUENCED THE DEVELOPMENT OF COGNITIVISM:

1. development of experimental psychology

2. the move from on interest in external behaviors to internal brain process

3. the inadequacy of computer

- PRINCIPLES OF COGNITIVISM: cognitivism involves the study of mental processes such as sensation, perception, attention, encoding, and memory

- THREE IMPORTANT COGNITIVE THEORIES;

1. Piaget's cognitive development theory

2. Vygotsky's sociocultural cognitive theory

3. Information processing approach.

THE EDUCATIONAL IMPLICATION OF COGNITIVE THEORIES

- The implication of cognitive theories in educational field is try to produce the students to find the problem-solving, do discovery learning, cognitive strategies, and project based learning.

- Principles of cognitivism theory to improve teaching (Magna publication, 1995).

1. If information is to be learned, it must first be recognized as important.

2. During learning, learners act on information in ways that make it more meaningful.

3. Learners store information in long-term memory in an organized fashion related to their existing understanding of the world.

4. Learners continually check understanding, which results in refinement and revision
   of what is retained.

5. Transfer of learning to new contexts is not automatic, but results'-form

Cognitive Theory in Language Learning

- Cognitive Theory in language learning is a pedagogical approach that draws upon cognitive psychology principles to understand how individuals acquire, process, and use language.

Key principles of Cognitive Theory

1. Mental Processes
2. Schema Theory;
3. Information Processing;
4. Attention and Focus;
5. Working Memory;
6. Transfer and Interference;
7. Problem-Solving;
8. Metacognition;
9. Individual Differences;
10. Sociocultural

How key principles of Cognitive Theory can be applied in practical language teaching?

1. Mental Processes	In vocabulary learning, students can engage in mental processes like rehearsal (repeating new words), organization (grouping words by category), and elaboration (creating meaningful sentences using new words) to enhance retention
2. Schema Theory	When teaching a new grammar concept, instructors can activate students' existing schemata by connecting the new concept to previously learned structures. For instance, when introducing the past tense, relate it to the present tense they already know.
3. Information Processing	Teachers can break down complex reading passages into smaller sections and teach students strategies for processing and comprehending the information step by step.
4. Attention and Focus	In a listening comprehension exercise, students can be instructed to focus their attention on specific keywords or phrases related to the main ideas, improving their listening accuracy.
5. Working Memory	During a speaking activity, encourage students to construct sentences and respond to questions using their working memory to retrieve vocabulary and apply grammatical rules.

How key principles of Cognitive Theory can be applied in practical language teaching?

6. Transfer and Interference	When students transfer skills from their native language to the target language, they may experience interference. Teachers can address this by providing explicit instruction on differences between the languages.
7. Problem-Solving	In a writing task, students can encounter problems with sentence structure. Teachers can guide them through problem-solving by discussing possible solutions and revising their work.
8. Metacognition	Encourage students to reflect on their learning strategies. For instance, after a reading assignment, ask them to evaluate their comprehension and consider which strategies were most effective.
9. Individual Differences	Recognize that students have different learning styles and paces. Offer various materials and activities (visual aids, audio resources, written exercises) to accommodate diverse learning preferences.
10. Sociocultural Context	When teaching a foreign language, expose students to authentic materials (videos, podcasts, news articles) from the culture where the language is spoken. This helps them understand the language within its sociocultural context.

Cognitive Method in Language Learning:

From the view of cognitive method, learning strategy (students) and teaching method (teacher) should be centered around student' mental process rather than the external behavior and it is teachers' role in

What Are The Processes Of Cognitive Learning Theory?

1. Perception

Perception refers to recognising the environmental stimuli and
the action while responding to the stimuli. It is a significant cognitive learning process wherein
information during simple or complex events. In addition, prior experience also affects one's perception.
individuals process
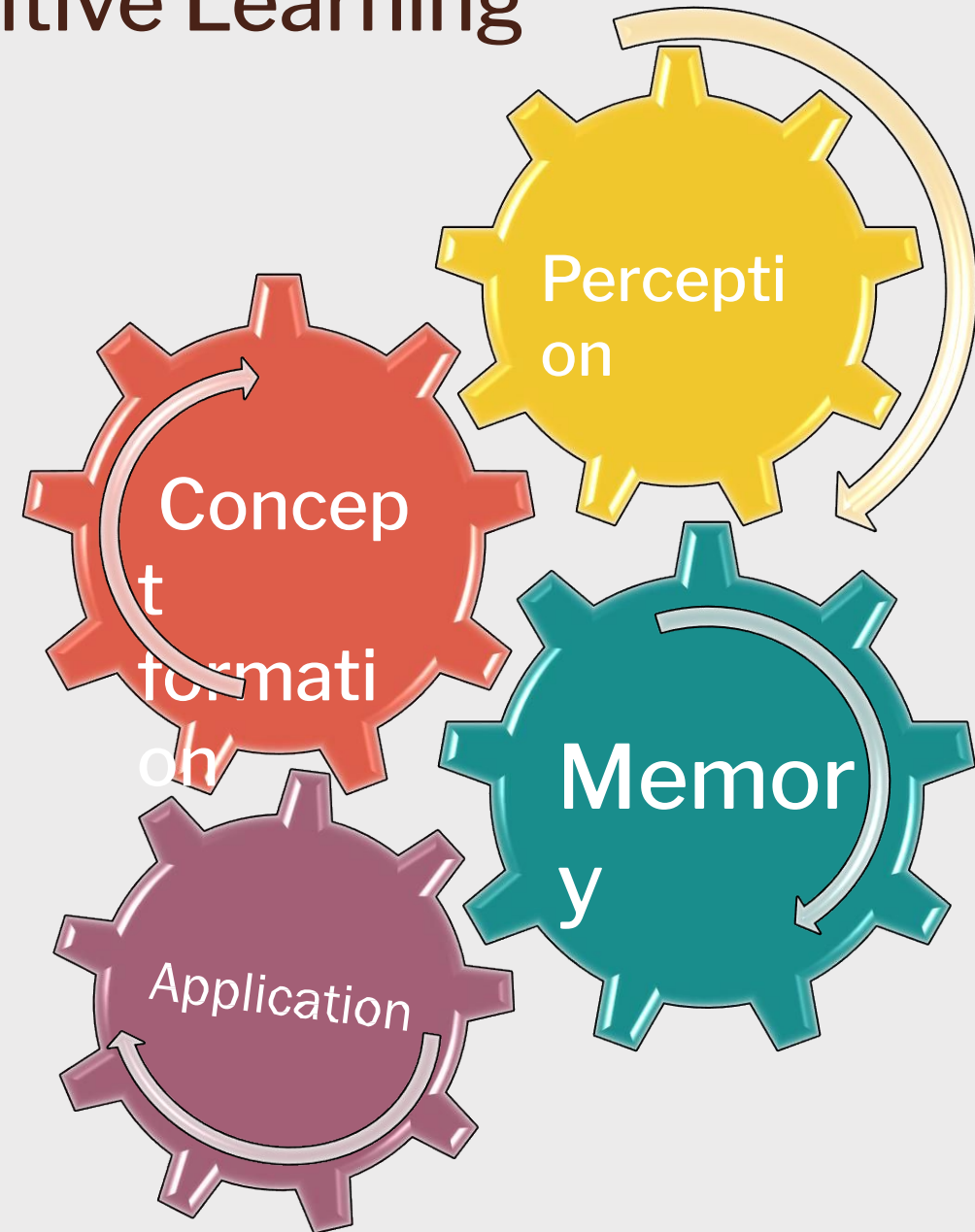
2. Concept Formation

Concept formation helps to organise information accordingly in different categories. For instance, it helps to decide which way to go after seeing a road sign pointing in a specific direction.

3. Memory

Memory forms the foundation of the cognitive learning process as it helps to store and recover information that individuals have previously learned. Moreover, it does not focus on short-term or long-term memory. Instead, it emphasises creating an environment of mastering a concept that helps them to relate to their prior experiences.

4. Application

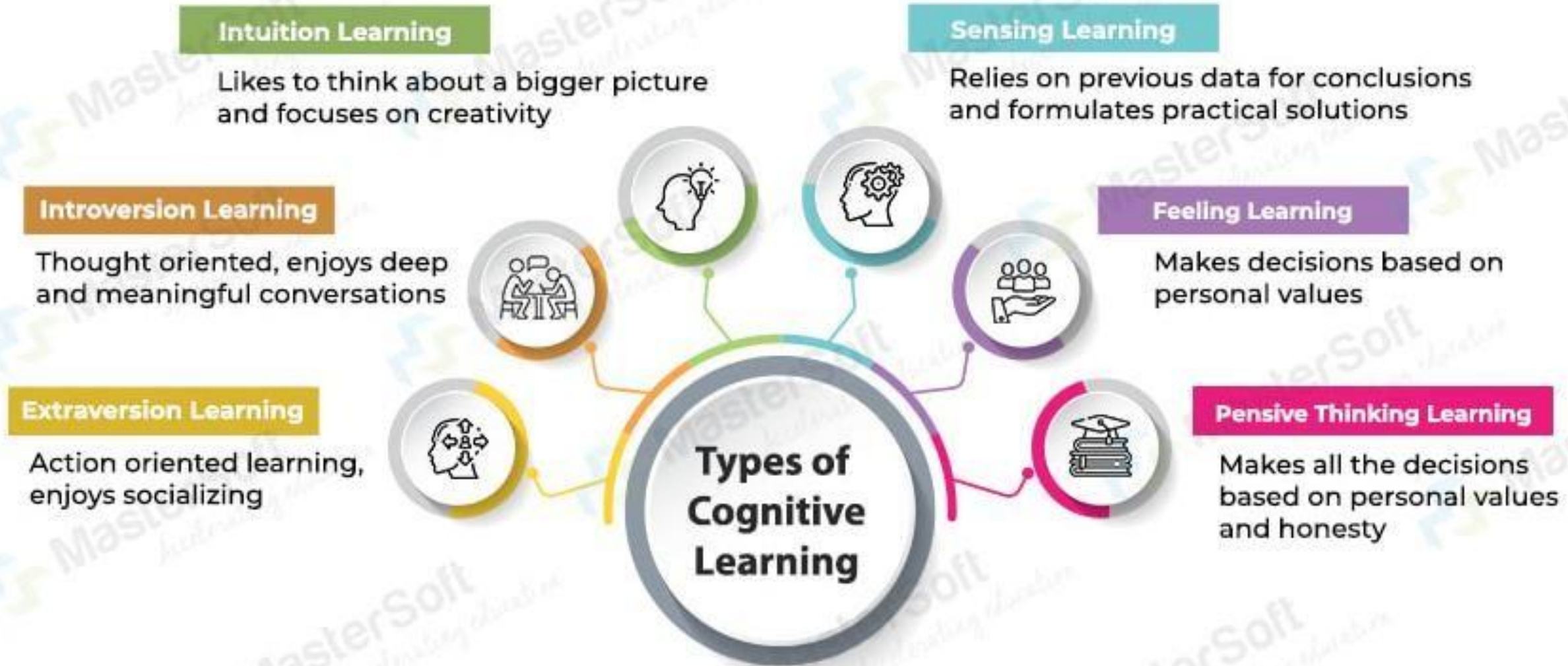The application component of the cognitive learning approach promotes the application of new information or skills in real-life situations. Consequently, helping to develop problem-solving skills

Perception

Concept formation

Memory
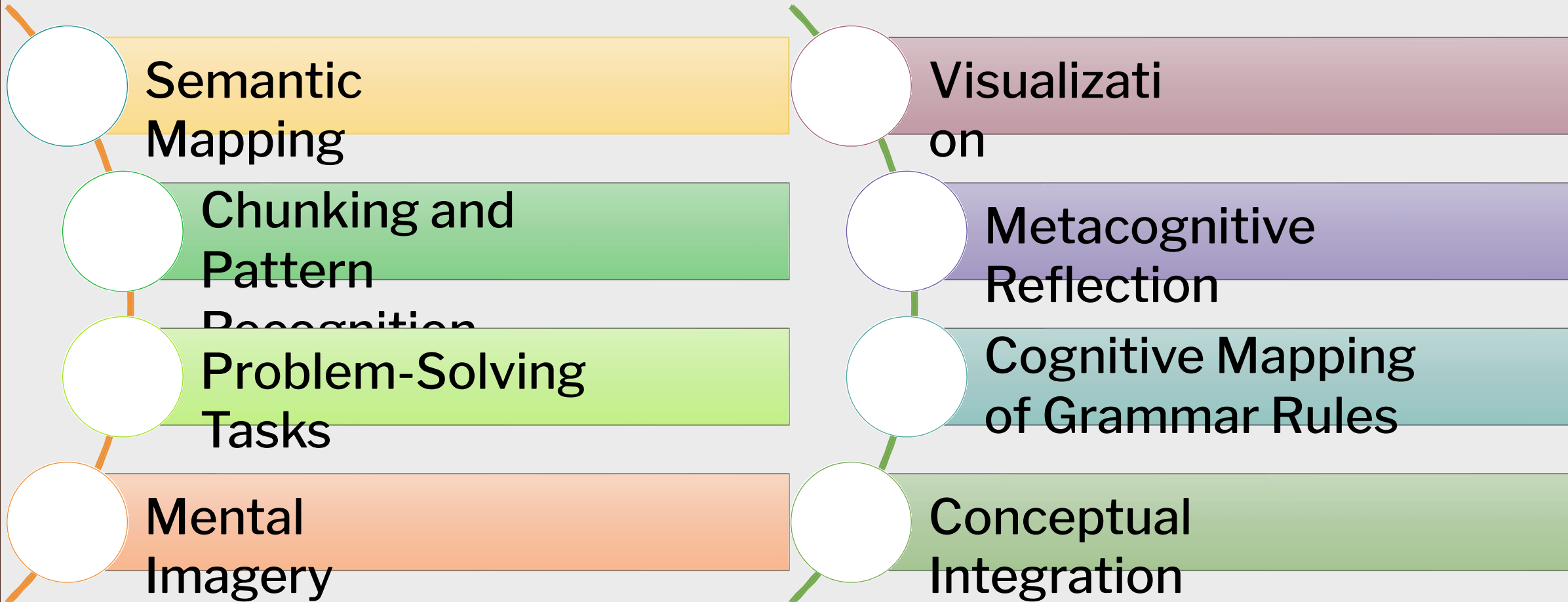
Application

What Are The Strategies Of Cognitive

Learner-Centred Strategy

Learning Through Discovery Strategy

Meaningful Learning Strategy

Personalised Learning Strategy

Types & Examples Of Cognitive Learning Strategies

Intuition Learning

Likes to think about a bigger picture and focuses on creativity

Sensing Learning

Relies on previous data for conclusions and formulates practical solutions

Introversion Learning

Thought oriented, enjoys deep and meaningful conversations

Feeling Learning

Makes decisions based on personal values

Extraversion Learning

Action oriented learning, enjoys socializing

Pensive Thinking Learning

Makes all the decisions based on personal values and honesty

Types of Cognitive Learning

Cognitive Activities

The goal is to activate and develop thinking ability and problem-solving ability

Semantic Mapping	Visualization
Chunking and Pattern Recognition	Metacognitive Reflection
Problem-Solving Tasks	Cognitive Mapping of Grammar Rules
Mental Imagery	Conceptual Integration

Cognitive Tools

Semantic Organization Tools

Dynamic Modelling Tools

Knowledge Construction Tools

Visualization Tools

Socially Shared Tools
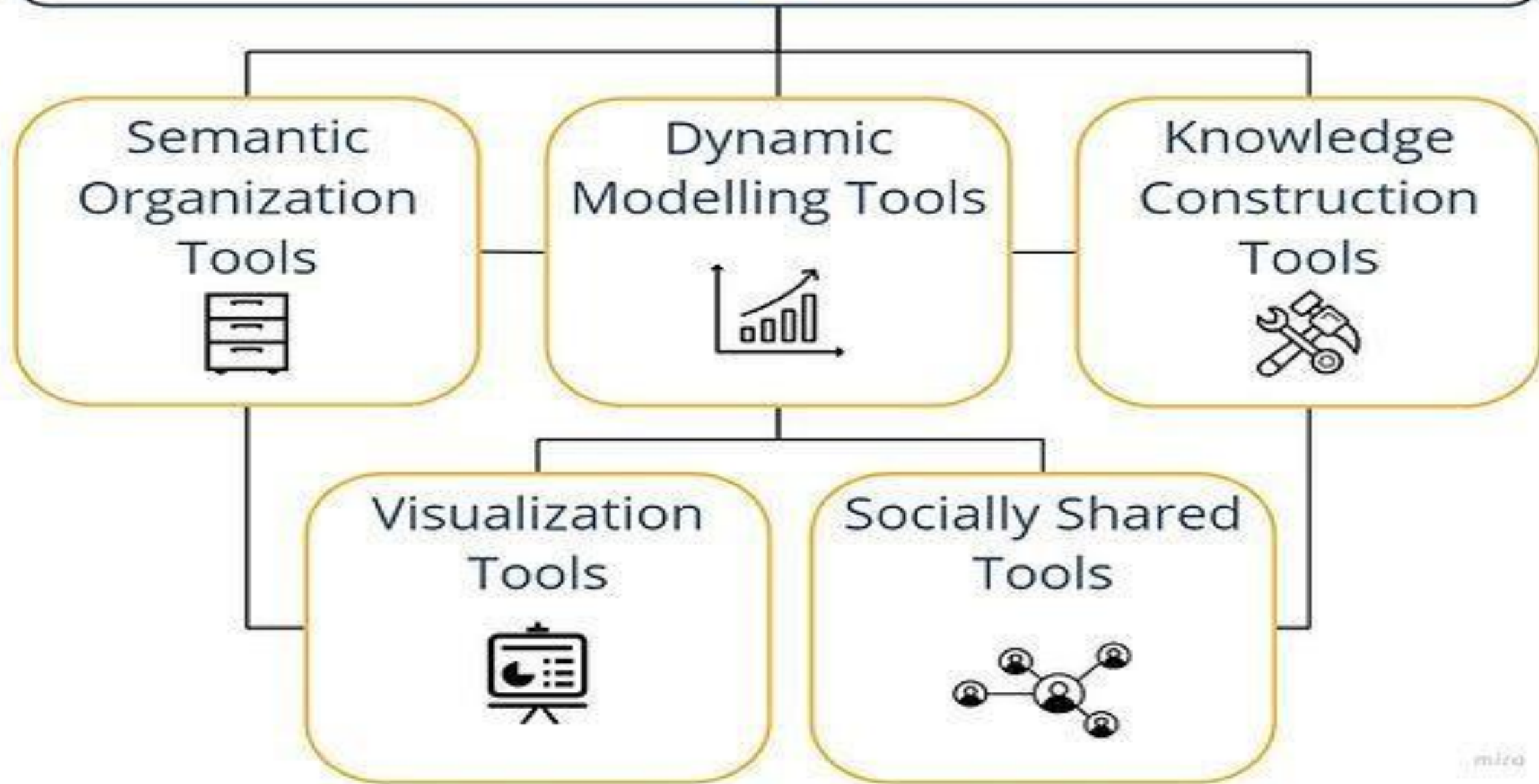
Typologies of cognitive tools (Jonassen & Carr, 2000)

1- semantic organization tools
(e.g., databases and concept mapping tools)

2- dynamic modeling tools
(e.g., spreadsheets and microworlds),

3- visualization tools
(e.g., MathLab and Geometry Tutor),

4- knowledge construction tools
(e.g., a multimedia authoring tool),

5-socially shared cognitive tools
(e.g., computer conferencing (forums) and computer-supported collaborative argumentation).

Cognitive Approach in Language Learning:

Limitation Strength

Flexible theory, easily combined with other theories to make more positive results.

positive significance for those who want to use the cognition to change their learning behavior for the better.

focuses on whether what we view the working procedure of our mind is true. Cognitive approach often relies on comparisons with how human mind might work.

It highlights how mental process greatly influences behavior and the disparity of learning effects.

ignorance of emotional variables

Aims to discover what might be the better way for the acquisition of language in our mind