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Creative Teaching to Learn

Inspiration – Information – Initiation - Implementation

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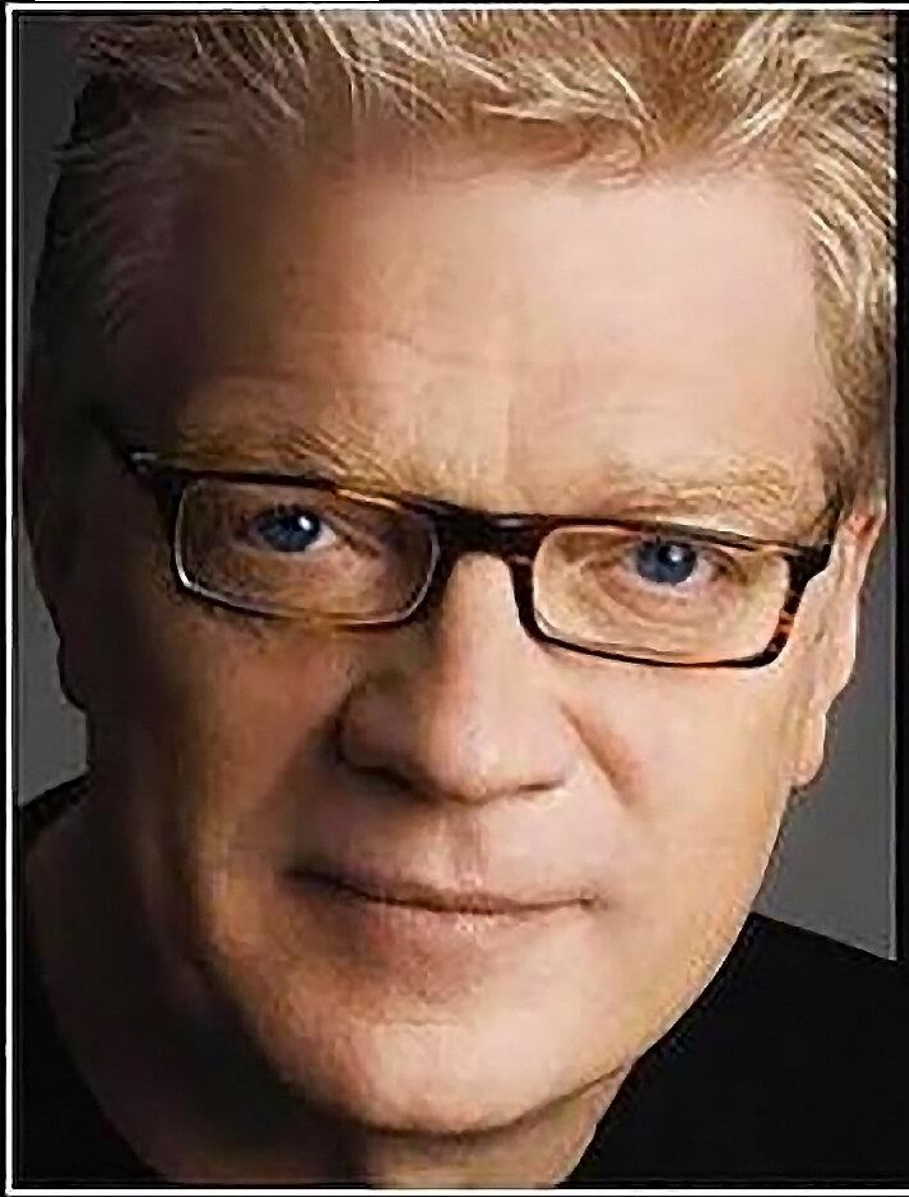

Our task is to educate our student's whole being so they can face the future. We may not see the future, but they will and out job is to help them make something of it.

Learning to teach through creativity is vital for engaging students and deepening learning.

— Ken Robinson —

Coffee break (20 minutes)

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Lacking knowledge, skills and competences

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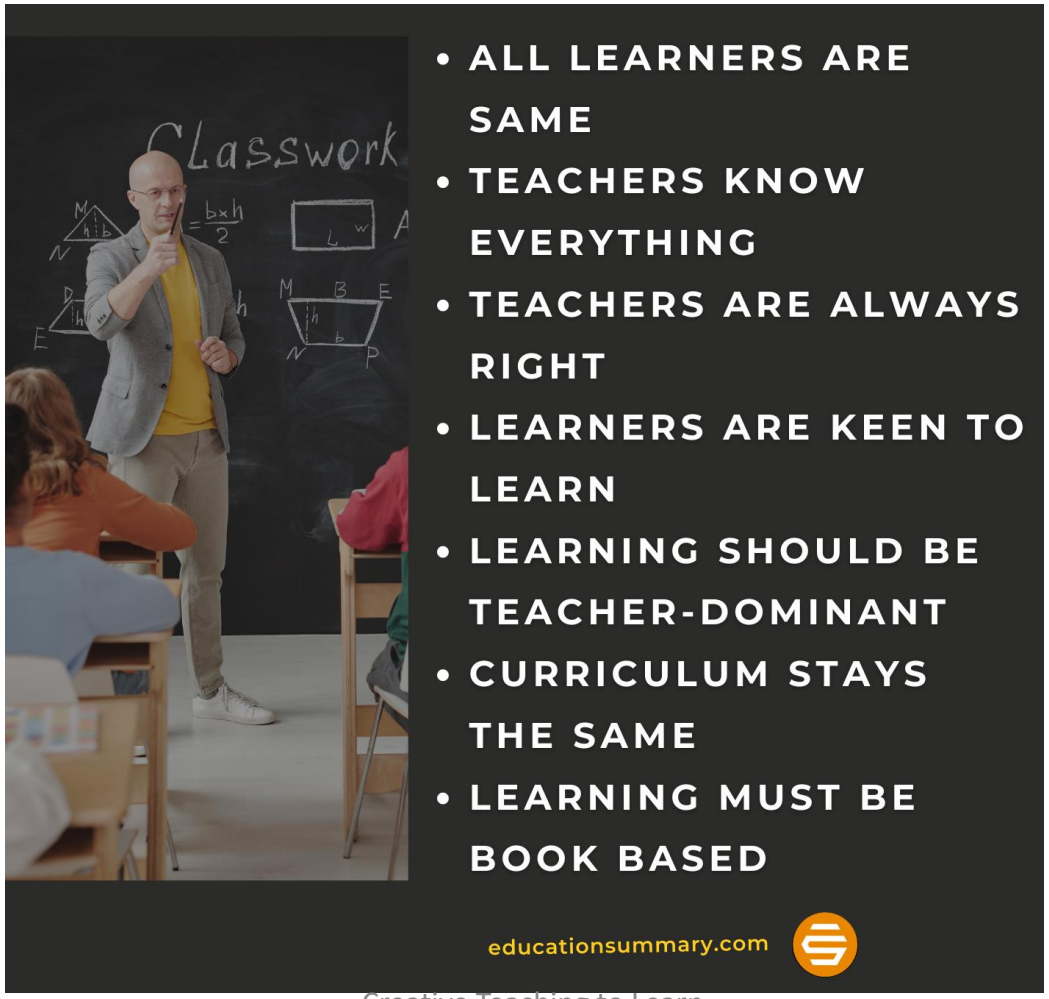
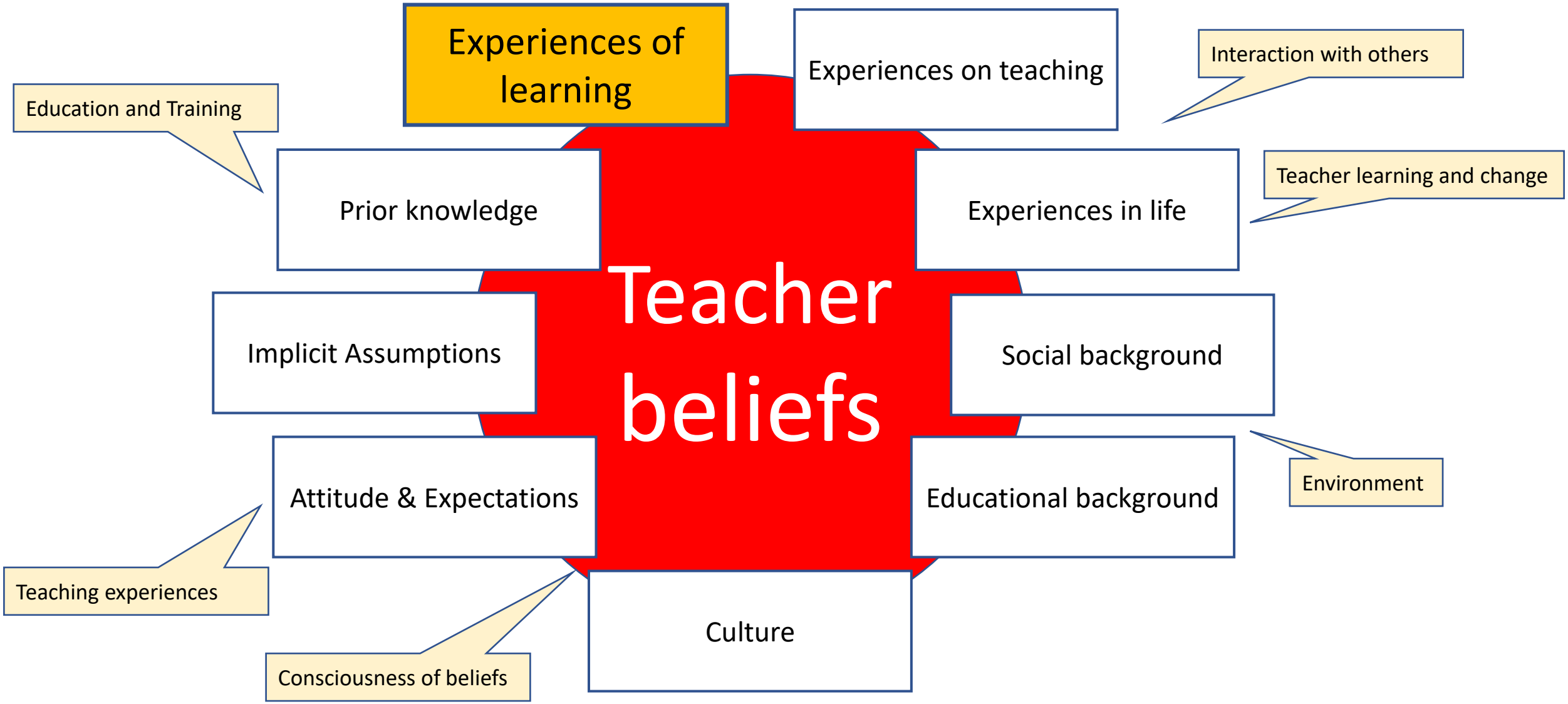
Teachers have personal teaching beliefs




Experiences of learning
Experiences on teaching
Interaction with others
Education and Training
Prior knowledge
Experiences in life
Teacher learning and change
Teacher beliefs
Implicit Assumptions
Social background
Attitude & Expectations
Educational background
Environment
Teaching experiences
Culture
Consciousness of beliefs

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Barriers for implementing Creative Teaching Methods

Barriers Teachers Face	%
Lack of Knowledge and Skills	63.2
Time constraints	52.6
Class size	36.8
School Administration / facilities	36.8
Lack of resources	36.8
Students	26.3
Lack of Teaching methodology	21.1
Curriculum	21.1
Personal Characteristics	21.1
Personal Teaching Beliefs / Style	15.8
Nature of Creative Teaching	10.5

The barriers can be categorised into two main categories:

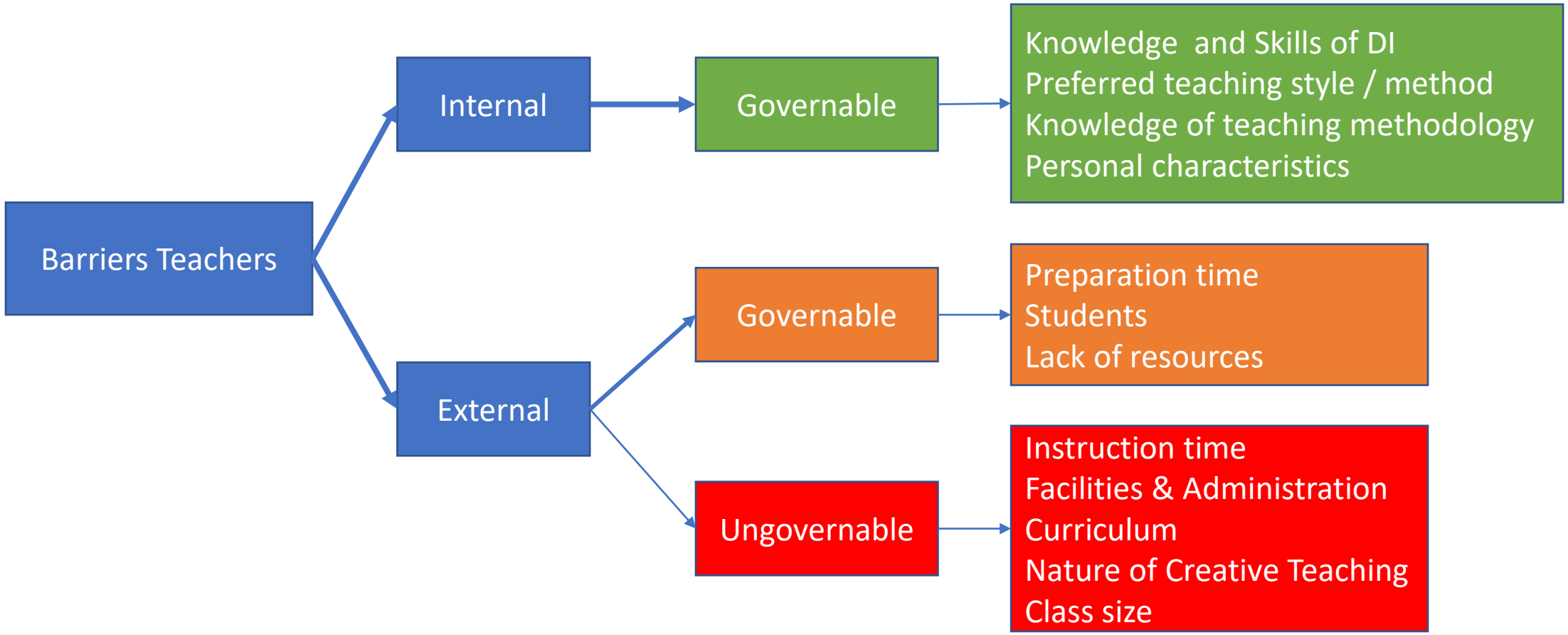
1. Internal (barriers that teachers face internally; in other words, the challenges they face within themselves)
2. External (barriers refer to the otherwise)

These challenges can be classified into:

1. Governable factors (factors refer to the ones that teachers are able to control or modify)
2. Ungovernable factors (factors which are otherwise)

Source: Barriers in new Teaching Methods: a systematic review of the Literature (Journal of Critical Review 2020)

Barriers Teachers face for implementing Creative Teaching Methods



Source: Barriers in New Teaching Methods: a systematic review of the Literature (Journal of Critical Review 2020)

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How do people learn?

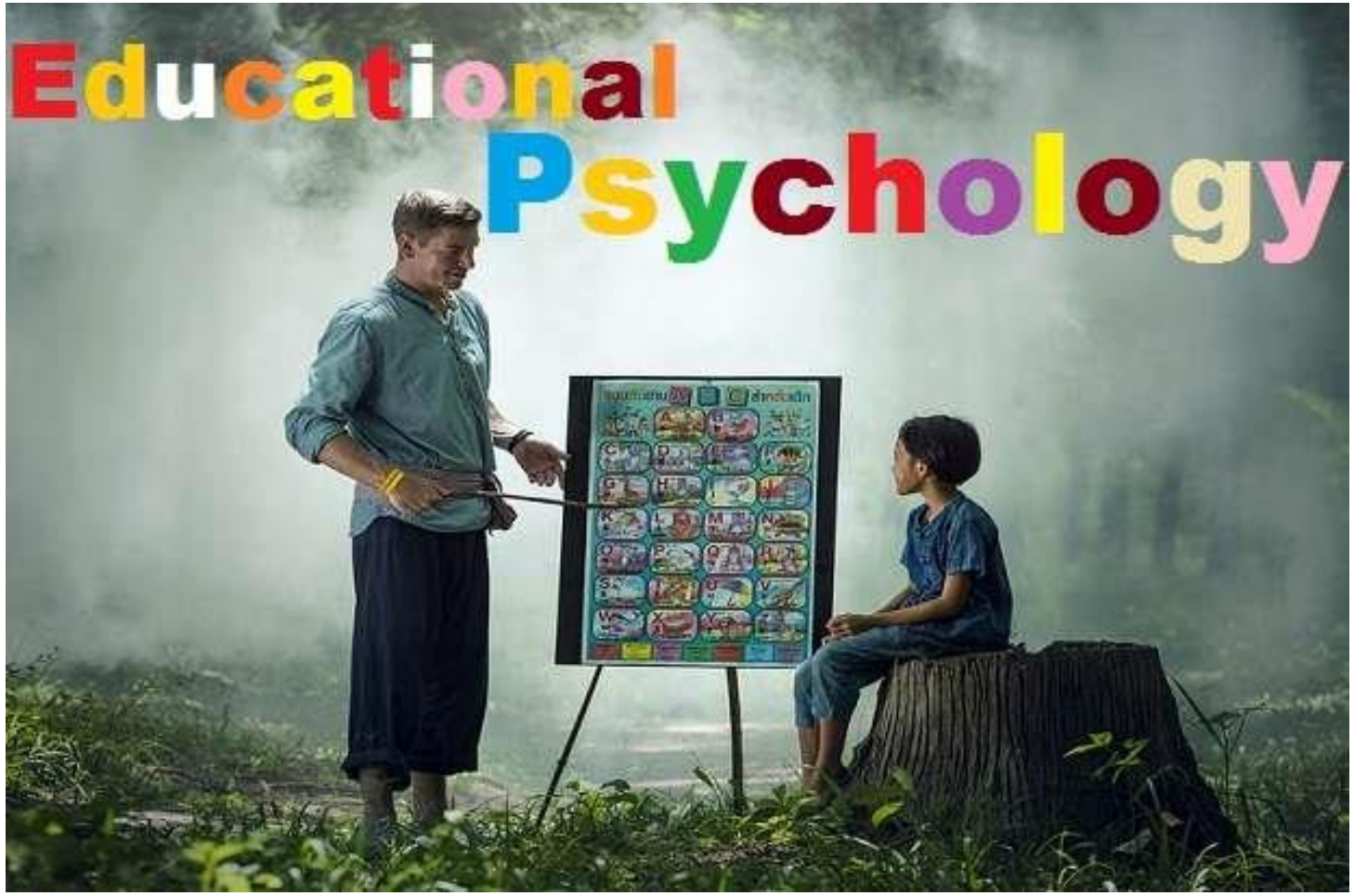
Learning experiences

Fundamental Learning Principles

Learning theories

Learning processes

Learning activities



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EXPERIENCES

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Who is the learner?

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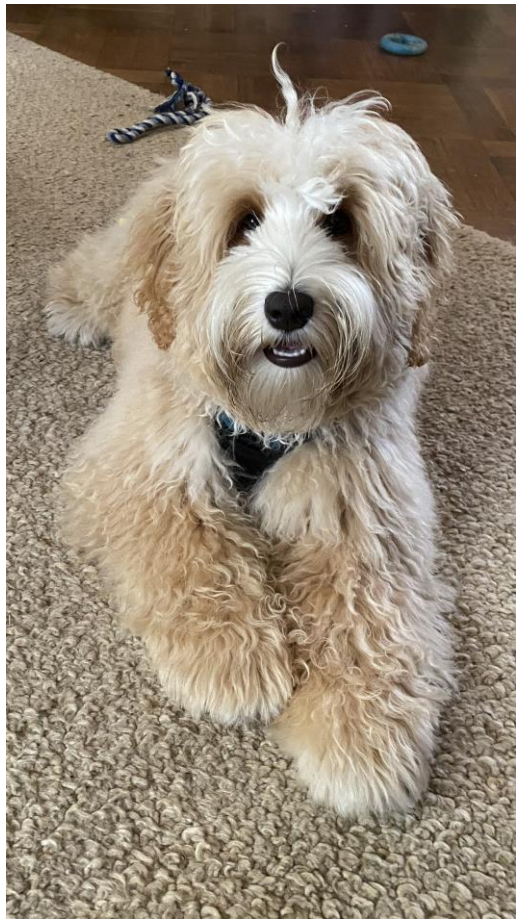
1. Basic needs of a dog
   - Physical exercise
   - Mental exercise
2. Rules, structure and clarity
3. Affection and connection
4. How does a dog learn?



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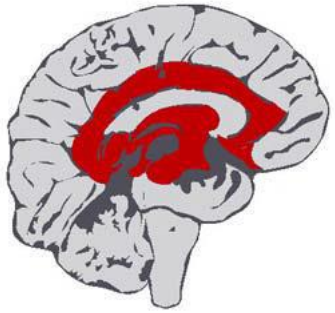
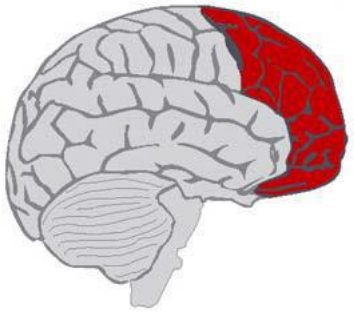
Fundamental Learning Areas

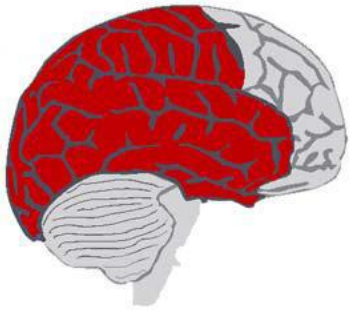
Brain research shows that learning is a diverse and pervasive process. Three areas of the brain are important in learning process. The three areas of the brain work closely together, although they are clearly distinguishable.



Affective network in the brain



Strategic network in the brain



Recognition network in the brain

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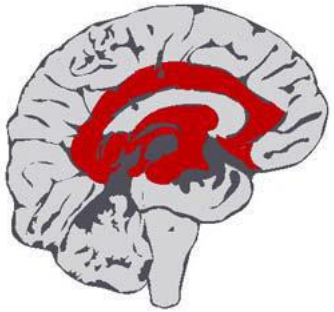
Affective network



Affective network in the brain

The affective network determines WHY the student learns.

This network evaluates patterns to be followed and attaches an emotional charge to it.

This part of the brain determines the student's involvement in his environment. (=Motivation) The degree of involvement in a particular learning moment differs per student. That's why it is important to use different means to involve students in education in different ways. This determines which lesson content the students prioritize.

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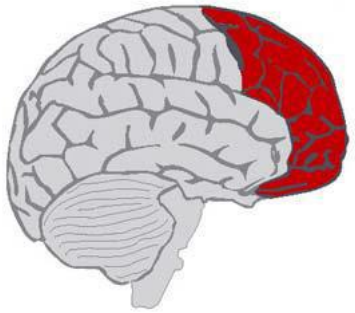
Strategic network



Strategic network in the brain

The strategic network determines HOW the student learns.

This network controls executive functions, such as mental and motor processes.

This part of the brain determines how a student plans, performs, and controls tasks. Because students deal with the Life Skills presented in different ways, it is important that they can demonstrate what they have learned in different ways.

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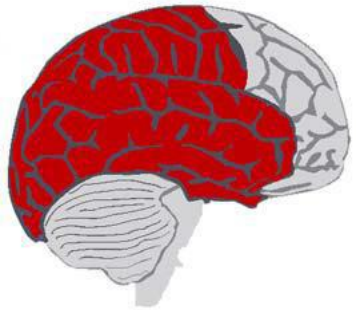
Recognition network



Recognition network in the brain

The recognition network determines WHAT the student learns.

This network gives meaning to the things we experience.

This part of the brain is responsible for identifying and understanding information, ideas and concepts. Because students differ greatly in this, there is no ideal way to present information. Information must therefore be presented to students in (as many) different ways as possible.

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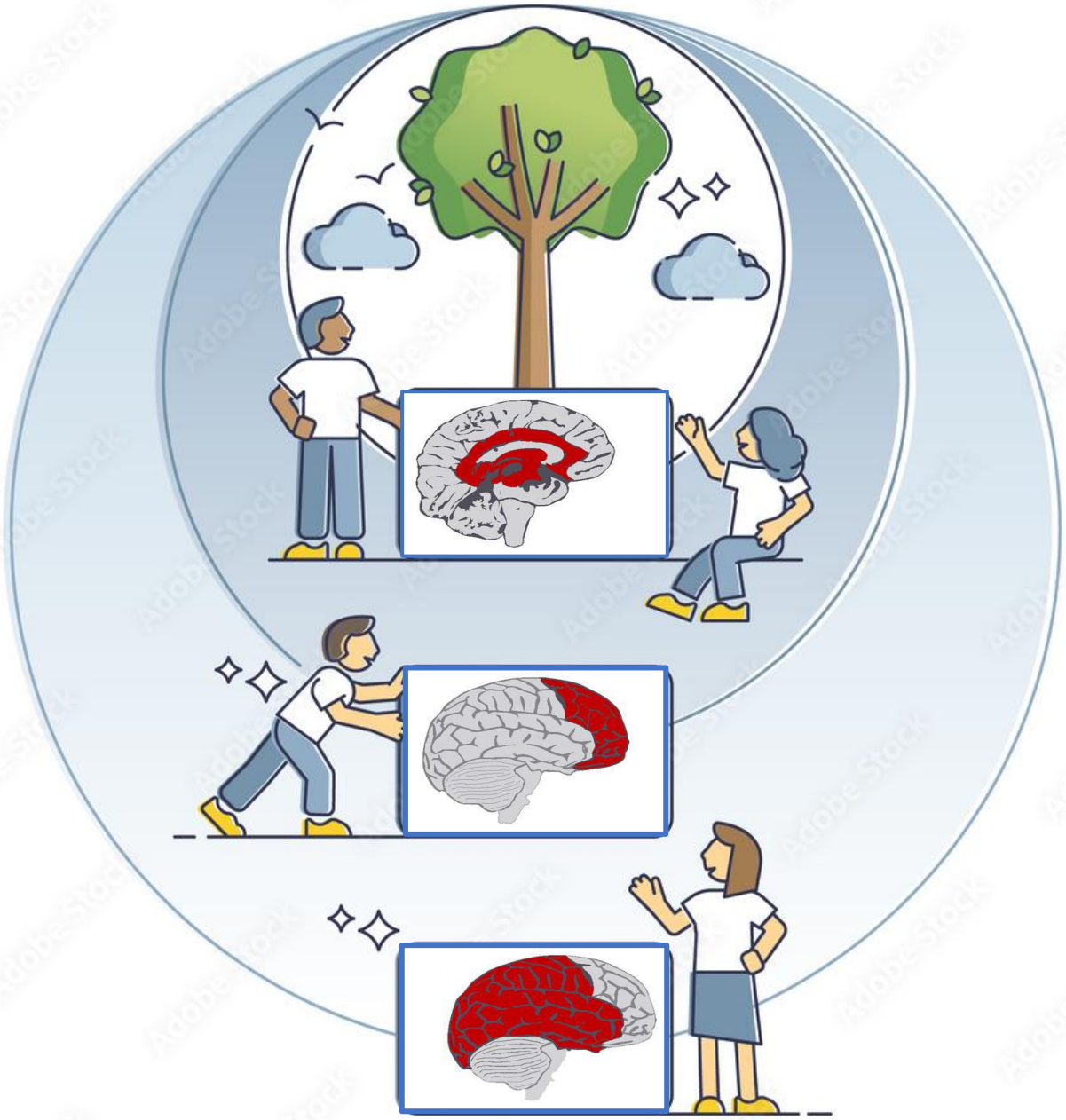

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Psychology of Learning

Scientific approaches of Learning relevant for Creative Teaching

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Operant conditioning

Operant conditioning is a form of learning where behaviour changes as a function of its consequences, i.e. the environmental effects that follow the behaviour:

- Behaviour that is followed by pleasant consequences is likely to be repeated
- Behaviour followed by unpleasant consequences is less likely to be repeated

According to this theory, behaviours can be modified through the association of stimuli with reinforcements or punishments:

- Reinforcements increase the probability that a student's behaviour will reoccur
- Punishments decrease the probability that an undesirable behaviour will be repeated

(Skinner, 1953)

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Reinforcements and punishments can either be positive (adding something) or negative (removing something).

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Modelling behaviour

In behaviour modelling, an individual can learn new behaviours by observing. The correct behaviour is demonstrated for the learner, the learner observes the model, and then imitates the behaviour of the model.

Phases:

1. Attention: The learner focuses on what the model is doing
2. Retention: The learner is able to retain, or remember, what he/she observed
3. Reproduction: The learner is able to perform the behaviour he/she observed.

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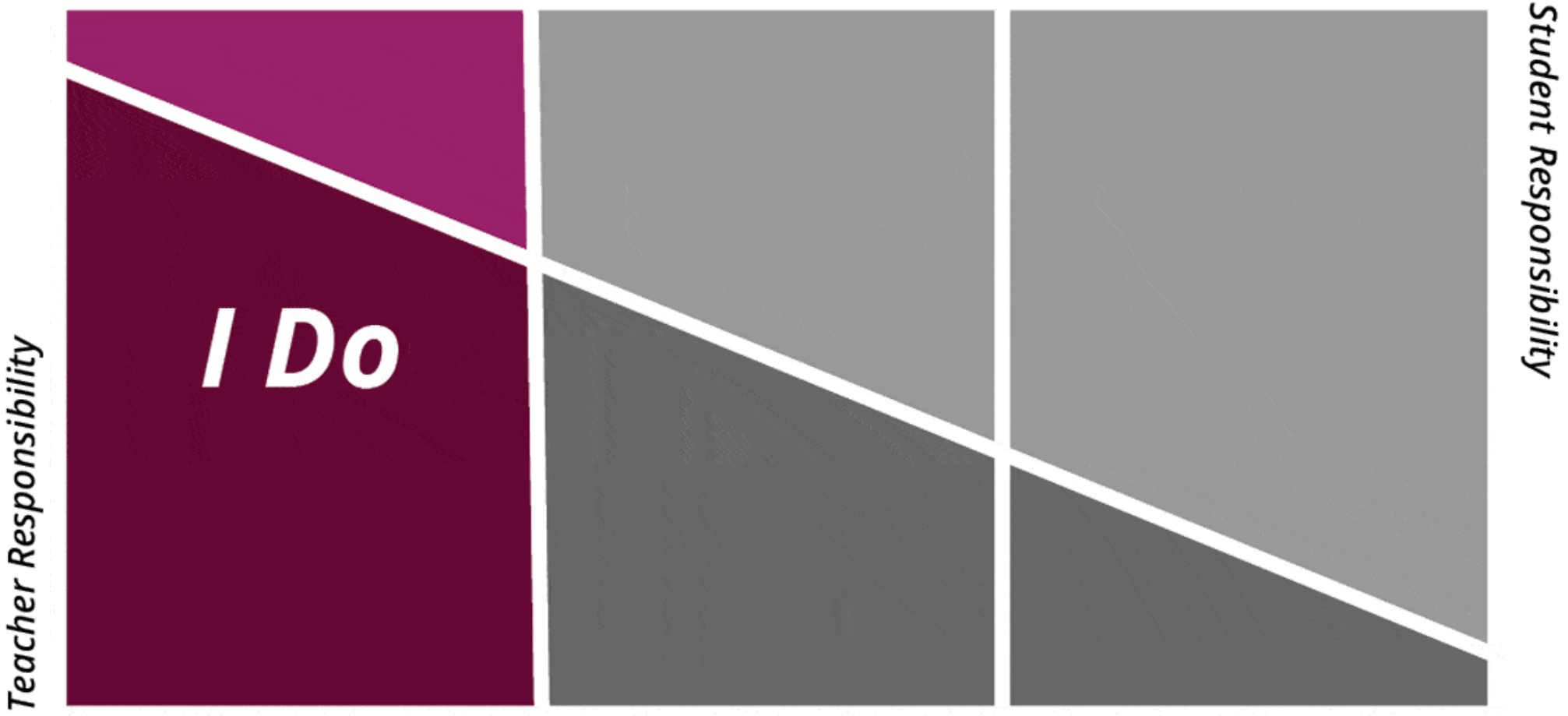
Modelling process in Skill training



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Practicing Modelling

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Lev Vygostsky

1896 -1934

- Lev Vygotsky assumes that the (cognitive) development of an individual takes place in a social context and emphasizes the guiding role of the adults (Teachers).
- Lev Vygotsky consequently focuses much more closely on social interaction as an support to learning; arguing that, left alone, students will develop - but not to their full potential.
- He refers to the gap between actual and potential learning as the Zone of Proximal Development (ZPD). He argues that it is only through collaboration with adults and other learners (peers) that this gap can be bridged.

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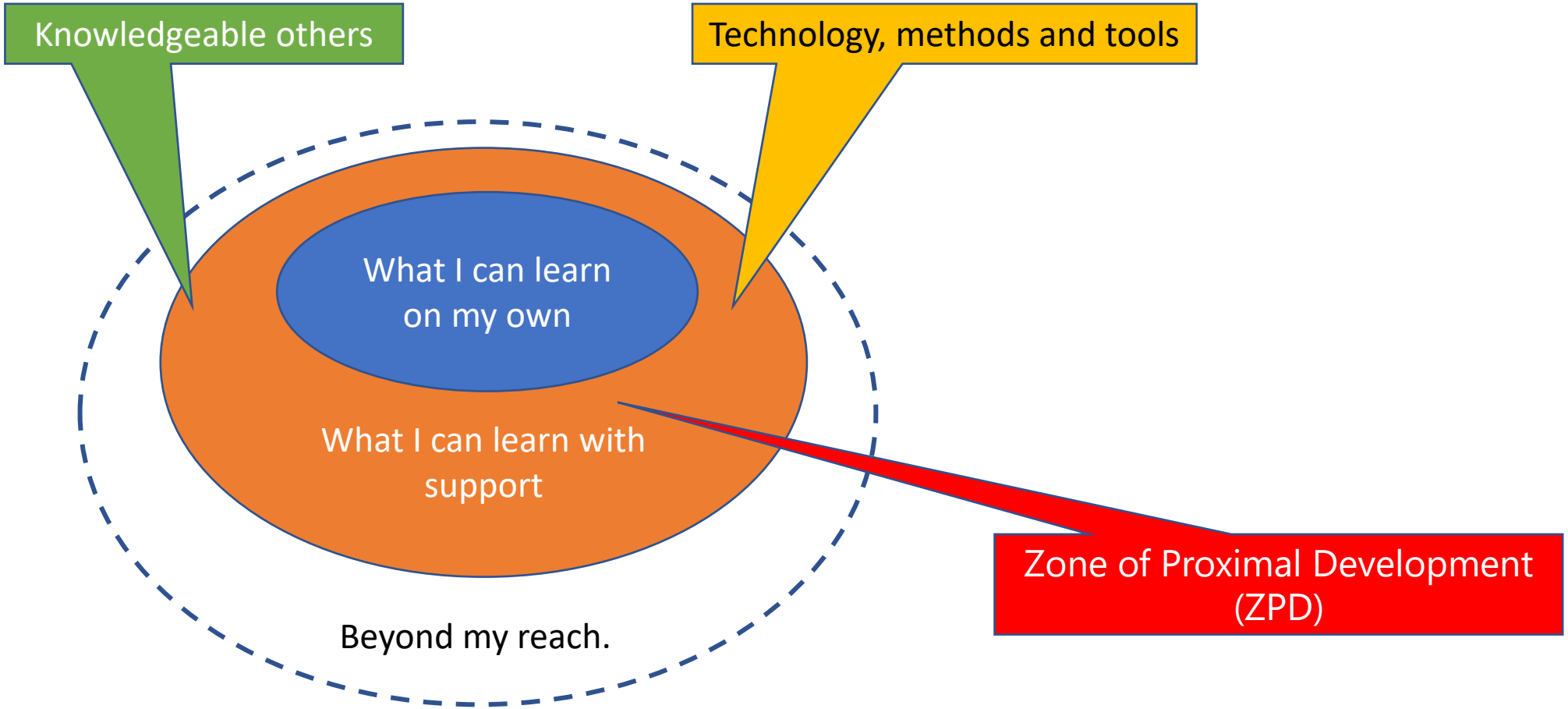
Zone of Proximal Development



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4 Dimensions of the actions

Pjotr Jakovlevitsj Galjperin
1902 - 1988

1. Level of the action
   - Material level
   - Verbal level
   - Mental level
2. Detailedness of the act
   - Actions can become shorter through insight, steps are skipped or shortened.
3. Degree of control of the action
   - With practice the action becomes better controlled (Automation)
4. Degree of generalisation of the action
   - Applying the action in a different context

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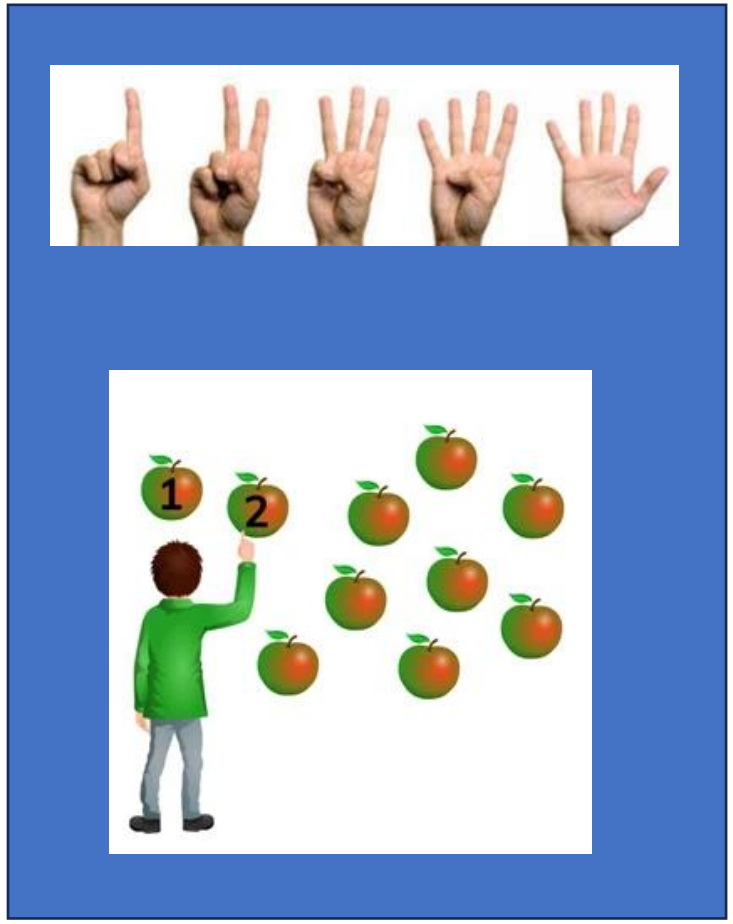
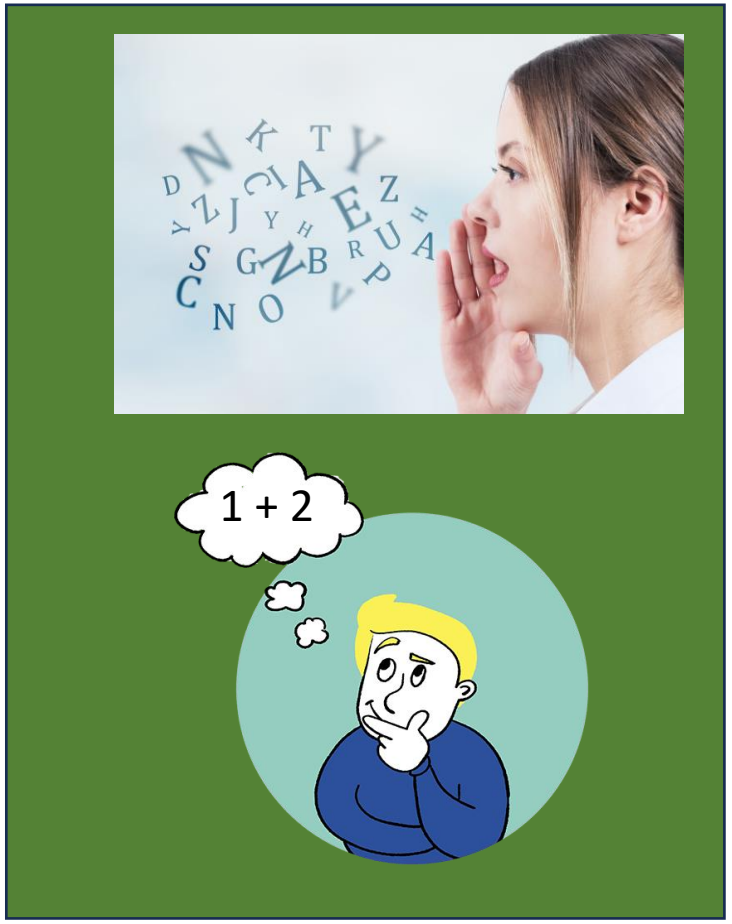
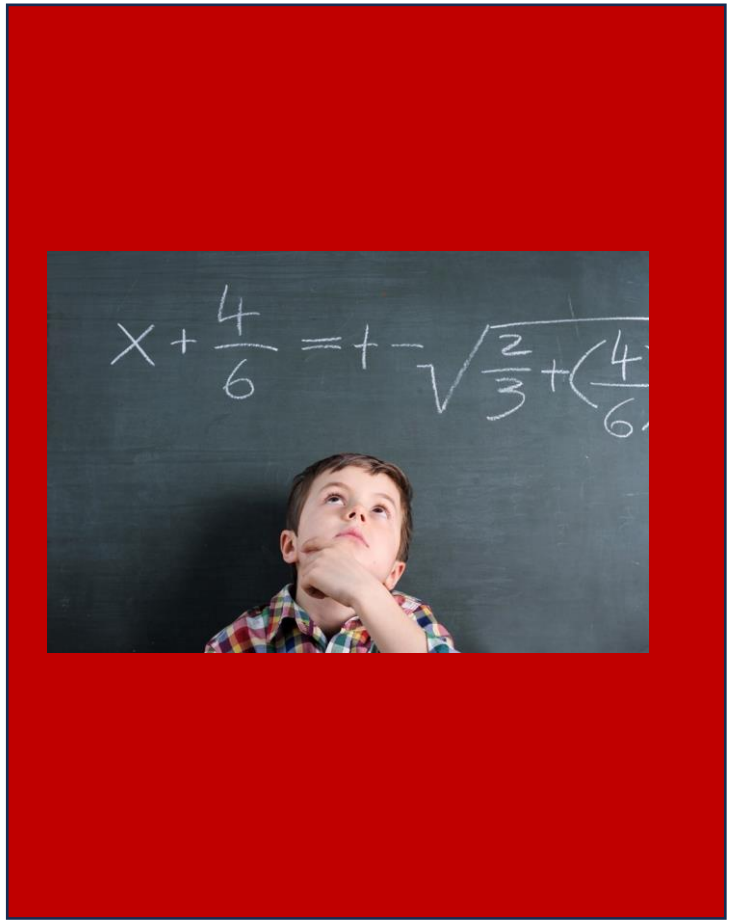
Level of the action



Material Level



Verbal Level



Mental Level

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Detailedness of the act

Not shortened	Shortened
457 +336	457 +336
400 + 300 = 700 50 + 30 = 80 7 + 6 = 13 700 + 80 + 13 = 793	700 80 13 793

Actions become shorter through insight, steps are skipped or shortened.

PRACTICING

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Degree of control of the action

Automation

5 x 5	25
3 x 8	24
12 x 12	144
5 x 7	35
15 x 15	225
50 x 50	2.500
10 x 2	20
7 x 8	56

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Degree of generalisation of the action

Applying in different context

How many hectare is the FIFA Football field?

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Abraham Maslov

1908-1970

In daily life people learn continuously

You learned to walk, talk and share your toys, then you learned how to write and count …. etc. etc.

You learned to tie your shoe

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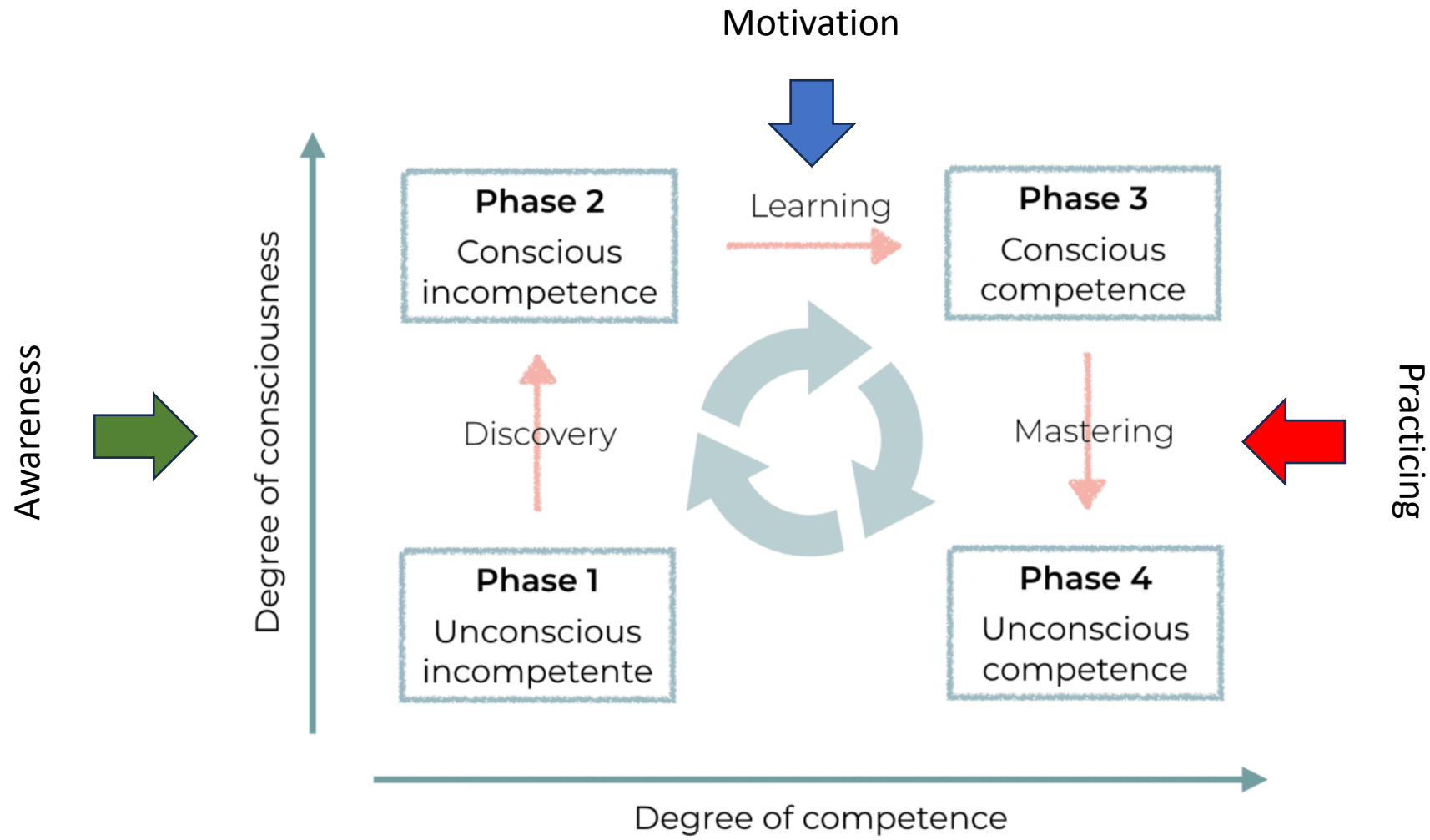
Maslov's Learning Cycle



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