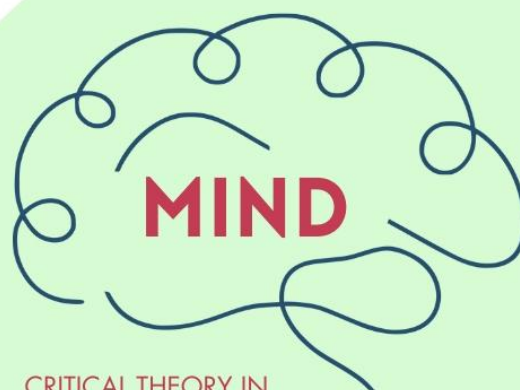


# The MIND model:

## Model Framework for the Development of Critical Thinking in Non-Formal Adult Education



CRITICAL THEORY IN  
ADULT EDUCATION PRACTICE:  
EMPOWERMENT FOR CRITICAL ACTIONS

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## Introduction

The Model Framework for the Development of Critical Thinking (hereafter referred to as "the MIND model") is intended for non-formal adult education staff, teachers, trainers, and adult education programme developers who wish to develop and enhance the critical thinking skills of diverse groups of adult learners. "Diverse" means a variety of age groups, social backgrounds, ethnic origins and other diversities that transcend geographical and cultural boundaries. This is the universality of our MIND model. We, its creators, are confident that it can be easily applied to formal education because of its philosophical-methodological approach, based on a wealth of research into how adults learn best.

## Methodological background

In order to create a universal MIND model, the project team first conducted a systematic literature review, both international and national (namely Croatian, Latvian, Lithuanian, Romanian). A systematic analysis of the literature revealed that the development of critical thinking, as well as the concept itself, lacks scientific attention in the context of non-formal adult education. The concept of critical thinking and its components are more or less universal to all educational contexts and environments. However, the approach to developing critical thinking varies. We have identified 4 methodological approaches relevant to non-formal adult education.

We have identified 4 methodological approaches relevant to non-formal adult education:

- **First**, Brookfield's, based on critical theory and pragmatism.
- **Second**, Garrison's, based on self-directed learning and critical theory.
- **Third**, Santos Meneses, Pashchenko, Mikhailova's mix of problem-based learning, self-directed and collaborative learning; online and offline learning; synchronous and asynchronous learning.
- **Fourth**, Meredith & Steele's, based on social constructivism and pragmatism.

All four methodological approaches were evaluated by the project team using a SWOT analysis. Each approach was assessed as having its own strengths and weaknesses, opportunities and pitfalls for implementation in specific adult learning contexts.

Therefore, in order to meet all the needs and opportunities, it was decided to create a new model based on the existing ones. The new MIND model is based on theories of social constructivism, pragmatism and critical theory, which provide a large body of knowledge and evidence on the development of critical thinking in non-formal adult education.

**Social constructivism**, because knowledge and experience in its application is gained through interaction with others and among others. Critical thinking is individual but also social because it is acquired, developed and practised in a specific social context.

**Critical theory**, because of its attempt to challenge existing norms, to fight for truth, justice, equality, is very much in line with non-formal adult education, and of course with opportunities to develop critical thinking.

**Pragmatism**, because of its experimental nature, practical approach to problem solving, which is an ultimate goal of critical thinking – to apply knowledge and skills to a practical action.

The newly constructed model is called the **MIND model**, after the abbreviation of the project name.



## The MIND model

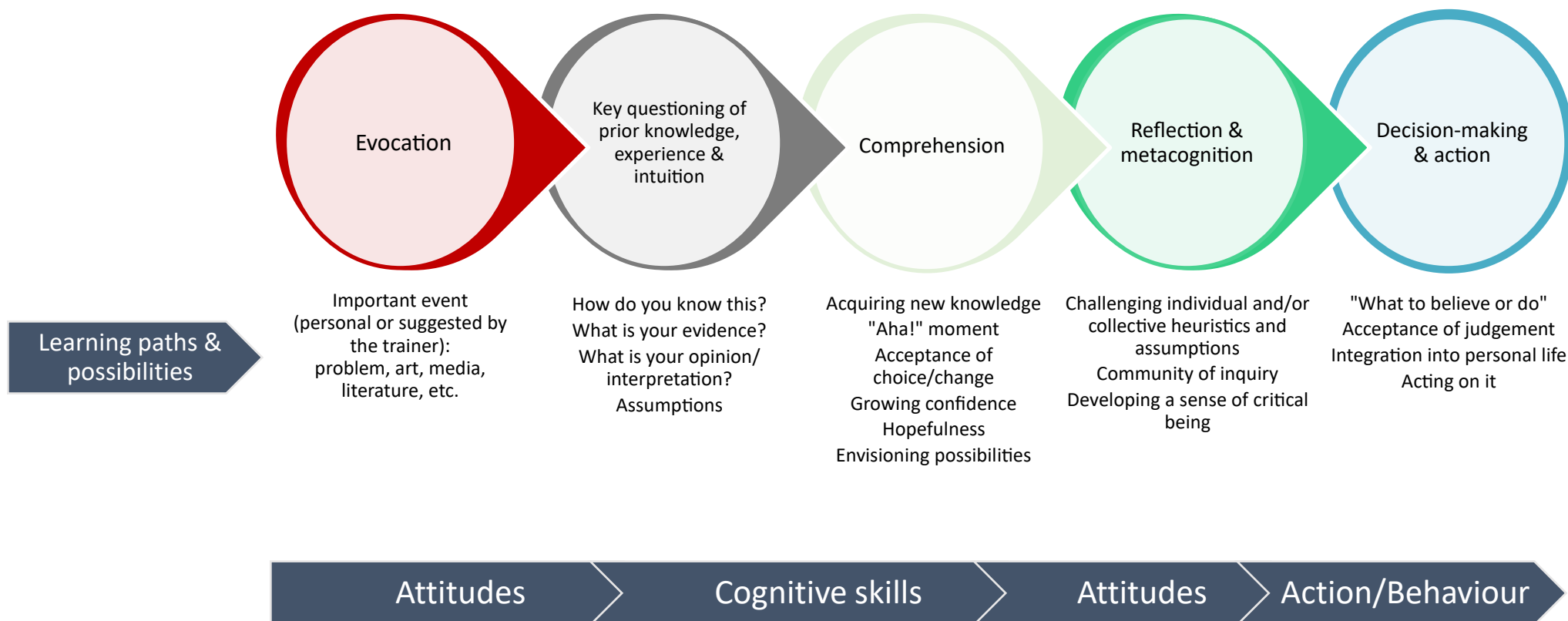


Figure 1. The MIND model (The Model Framework for the Development of Critical Thinking in Non-Formal Adult Education)



## General description of the MIND model

It reflects the process of developing critical thinking, which is a comprehensive, sequential but not closed and completely finished process. The thinking process itself is never complete, and the way it is experienced may vary from situation to situation.

The process consists of 5 stages, which are closely linked but can be practised and experienced separately.

### Stage 1: Evocation

This is the stage where a learner's interest in an idea, question, problem or issue is piqued and he/she wants to explore it further, dig deeper and find answers to his/her questions. Evocation is twofold: it means the evocation of an interest and of prior knowledge and experience. Evocation can occur not only with other people, but also with oneself. For example, reading a book, observing the environment, watching a television programme or a film. In the context of non-formal education, where learning takes place on or off site, together with others, the stimulus for evocation is provided by a teacher and guided through a whole phase.

At this stage, most reference is made to existing attitudes developed in previous experiences.

### Stage 2: Key questioning of prior knowledge, experience and intuition

"Intuitions are subliminal or unconscious thoughts or conclusions that influence our behaviour but are not strong enough to rise to consciousness. Therefore, by asking questions such as "how do you know this?", "why do you believe this?", "is there any evidence for this statement?", "who told / informed you about this?", the educator can break through the subconscious barrier and move on to critical analysis. This stage is a small step away from evocation, or it can be called an extension of evocation. At this stage, learners make assumptions about a question, an idea, an issue, a problem. They may hypothesise, guess, predict, without necessarily having solid evidence. In the context of non-formal education, an adult educator, teacher or trainer facilitates a process of questioning, sharing personal assumptions and initial interpretations.

At this stage, existing attitudes are challenged and cognitive reasoning is "switched on".

### Stage 3: Comprehension

At this stage learners immerse themselves in a question, an idea, a problem, a topic, exploring it and deepening their understanding. At this stage, stronger knowledge and beliefs are formed based on new (or confirmed) evidence. It depends on and deepens the key questions from the previous stage. Understanding can be gained through individual, self-directed or group – cooperative and collaborative work. The adult educator, teacher, trainer facilitates a process of gaining new meaning in both cases – individual and group work. The difference is in the methods of facilitation. Learning can take place on-site or off-site, in direct or hybrid or blended interaction.

At this stage, cognitive strategies and methods are used to activate thinking, to gain new meaning, to verify assumptions, hypotheses, previous interpretations about an issue, question, problem, topic under investigation.

## Stage 4: Reflection and metacognition

This stage involves reflection and rethinking on newly acquired knowledge and experience, whether individually or collectively. It is a process of evaluating and re-evaluating previously held beliefs and attitudes at personal and group levels. The adult educator, teacher, trainer facilitates a process of reflection in all cases – individual and group work. The difference is in the methods of facilitation. The process can take place on-site or off-site, in direct or hybrid or blended interaction.

At this stage, new attitudes are formed and/or previous ones are reconsidered, tested or improved. Metacognitive strategies and methods are used to activate reflection and metacognition. Adult learners develop and grow feelings of "critical being".

## Stage 5: Decision-making and action

At this stage, knowledge, cognitive skills and attitudes are integrated and put into practice. Learners draw conclusions about "what to believe or do", make informed judgements and take active stances/actions in their personal, professional and social lives.

As critical beings, adult learners act on critical judgments and continue to test and reconsider them from time to time in important circumstances that generate new ideas, raise questions and demand new solutions to an old or new problem. The model is therefore linear and procedural, but not closed – it can be repeated again and again.

Each stage may take a different amount of time, depending on the learning environment and situation.



## Extended explanations of the MIND model

STAGES OF CT DEVELOPMENT	CT ATTITUDES AND SKILLS TO BE DEVELOPED	ROLE OF ADULT TEACHER	ROLE OF ADULT LEARNER	EXAMPLES OF INDIVIDUAL LEARNING APPROACHES	EXAMPLES OF GROUP LEARNING APPROACHES
<b>Stage 1: Evocation</b>	Wonder, curiosity	Creating an open learning environment	Be prepared to recall previous knowledge & experience, be prepared to share it & be open to new possible experiences.	As a learner begins to read a book or attend an event, they recall past experiences & make connections with a new upcoming experience, creating curiosity to learn more.	Teacher stimulates thinking about an important topic, question, idea and learners share their thoughts using a method such as "brainstorming".
<b>Stage 2: Key questioning of prior knowledge, experience &amp; intuition</b>	Openness, questioning, raising hypotheses, seeking the truth.	Create an open learning environment, ask thought-provoking questions.	Actively engage in the thinking and learning process by raising thought-provoking questions and hypotheses, sharing assumptions and being prepared to test them.	A learner explores previous experiences, asking questions such as: How, when did this happen? How does it relate to the new event? What was my role? What was I thinking at the time? How might this new event, reading, develop from my experience?	The teacher invites discussion in a smaller or larger group and learners interact using methods such as "think-pair-share", "mind map", etc.
<b>Stage 3: Comprehension</b>	Being analytical and analysing, explaining and interpreting, being systematic,	Encouraging, supporting, scaffolding inquiry & investigation.	Actively engaging in the thinking & learning process using self-directed and/or cooperative learning strategies.	A learner reads a book using active thinking and comprehension control methods (such as I.N.S.E.R.T), participates in an event using observational	Teacher provides instruction & guidance on the process of inquiry & investigation, learners interact using methods such as "debate", "corners", "round table" etc.



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	reasoning, searching for truth.			strategies such as "observe & compare".	
<b>Stage 4: Reflection &amp; metacognition</b>	Openness, evaluation, self-correction, intellectual maturity.	Provide opportunities for & support reflection	Openness to reflection, sharing, and possible changes in knowledge, attitudes, future actions.	A Learner writes diary, reflection journal, shares reflections orally.	Teacher invites & facilitates reflection, learners reflect using methods such as "unfinished sentences"; "save the last word for me"; etc.
<b>Stage 5: Decision making &amp; action</b>	Self-regulation, decision-making	Supporting active engagement in critical action	Taking an active action, either a change of attitude or a practical action.	A learner initiates or takes an active action in a social event, a campaign, writes a critical review, etc.	A group of learners imitate a new project, develop a programme, write a petition, organise a social campaign, etc.



## Advantages and possible challenges of the MIND model

The model has many advantages in terms of practical application.

*Firstly*, it is easily recognised by adult educators and teachers who are used to using experiential, cooperative learning methods.

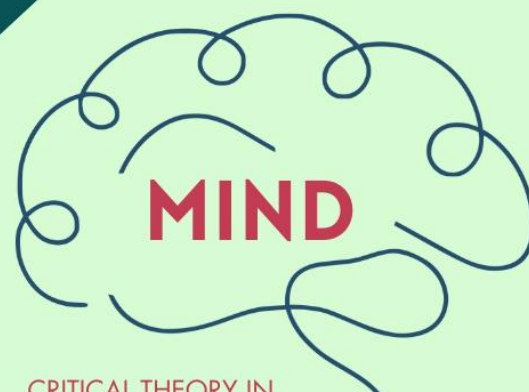
*Secondly*, adult educators usually build their teaching on the knowledge of previous learners, taking into account their experience. The proposed model also meets and recognises the value of prior knowledge and experience on both sides - teachers and learners. Previous knowledge and experience provides a solid background for new knowledge and experience, as it can best be acquired and evaluated in relation to what has already been acquired.

*Thirdly*, the proposed model gives the learner an active role while the teacher plays the role of facilitator. This is very common in non-formal adult education and adult educators are used to it.

The main challenge for the teacher is that active practical action is at the end of the process and needs to be approached calmly, consistently and quite slowly. The process requires a lot of patience, exploratory and analytical work for which both the teacher and the learners need to be prepared. Non-formal adult education activities are very often based on active practical action, with less emphasis on cognitive activities.

Therefore, there are several things that are necessary for those preparing to use this model:

- (1) to be familiar with the concept of critical thinking and the possibilities for its development;
- (2) to have a good background and practice in adult education;
- (3) to have a thorough grounding in the proposed model of critical thinking and the proposed training materials; and
- (4) to participate in a training course for educators in order to be able to prepare themselves to develop critical thinking among adults using the proposed programme or/and regular programmes with some improvements, adaptations or/and additions.



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