



# CRITICAL THINKING AS A COMPETENCE FOR 21ST CENTURY



ONLINE TRAINING ON DIGITAL  
COMPETENCES AND  
CRITICAL THINKING



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Trainings, workshops, lectures

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Digital Learning Scenarios | Media Competence | Social Media

# **Critical Thinking as a competence for 21st century**

**A workshop for the project “TeDiCom -  
Teaching Digital Competences in Adult  
Education”**

# Content

- 21st Century Competencies: Why
- Frameworks: Development of the 21<sup>st</sup> Century Competencies
- The 4 Cs in general
- Critical Thinking: What it means in particular?
- A Model of Critical Thinking
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## 21st century competencies: Why

- Digital transformation is changing the world of work (professions, workplaces, how and where we work)
  - Changes also penetrate deeply into our everyday life (how we communicate, interact)
  - ❖ Mass communication via social media (information overload/ flooding)
  - ❖ speed of dissemination of information
- causes serious problems: spreading of fake news / conspiracy theories and hate speech / insults / attacks on people e.g., by manipulating photos/ portraits, voice ...
- Other consequences of digitization: extensive possibilities for state surveillance, complex globalized economy, ...

## 21st century competencies: Why

- Digital transformation is changing societies
- Climate change: moving towards climate-neutral states / societies
- Migration: living in changing, diverse societies causes challenges for individuals

We live in an era of change

We need different competencies than before in order to be able to shape change. Learning competencies and personal development are central to this.

# Frameworks

## Development of the 21<sup>st</sup> Century Competencies

- Since the beginning of this century, institutions (public, private) have been working on the identification and description of competences / skills to meet the requirements of the digital transformation.
- One result is the "21st Century Skill Framework", which emerged from an initiative of the OECD in cooperation with governmental and private organisations (USA) and companies/corporations:  
Partnership for 21st Century Skills, 2008

# Frameworks

21st Century Skill Framework		
Areas of competence / competence fields		
Learning & Innovation	Digital Literacy	Career & Life
Critical Thinking & Problem Solving	Information Literacy	Flexibility & Adaptability
Creativity & Innovation	Media Literacy	Initiative & Self-Direction
Communication	ICT Literacy	Social & Cross-Cultural Skills
Collaboration		Productivity & Accountability
		Leadership & Responsibility

- New: competencies for all (not only higher education, leadership); framework for schools
- Criticism: It primarily addresses the needs of companies.

# Frameworks

- With the increasing challenges (the impact of the digital transformation on everyday life, migration/diverse societies, climate change), further broad-based competence concepts have been developed.
  - ➔ from competences for the world of work to competences for life
- OECD Project “Future of Education and Skills 2030” (2019)
  - ➔ Learning Compass 2030
  - “It defines the knowledge, skills, attitudes and values that learners need to fulfil their potential and contribute to the well-being of their communities and the planet.”
  - ➔ Critical thinking is part „Anticipation-Action-Reflection“



# Frameworks

- The European Framework for Personal, Social and Learning to Learn Key Competence (2020)

LifeComp		
Areas of competence		
Personal	Social	Learning to learn
Self-regulation	Empathy	Managing Learning
Flexibility	Collaboration	Critical Thinking (includes Creativity)
Wellbeing	Communication	Growth Mindset

sociocultural context

# The 4 Cs in general

- Regardless of where they are mentioned / placed in which framework
  - ➔ They belong to learning: in a whole or in a large part
- Some components to illustrate the 4 Cs:

Collaboration	Communication	Creativity	Critical Thinking
work with diverse teams	awareness of variety of communication strategies	awareness of idea-creation techniques	describe problems, ideas, information
coping with conflicts and disagreements	articulate thoughts	be open to new concepts, perspectives	awareness of potential bias in information
fair sharing of tasks and responsibility	interactions and conversations in different contexts	create and communicate new ideas by combining models / concepts	questioning in order to analyse, judge, decide

They are interconnected, they complement each other, they are interdependent / conditional

# Critical Thinking: What it means in particular?

Critical thinking is:

- **not** thinking a lot about something
- **not** question in a negative sense
- **not** simply criticising something
- **not** just about being able to identify misinformation

# Critical Thinking: What it means in particular?

Critical thinking:

- Is **questioning** to get a comprehensive picture of "something" (an opinion, an idea, a problem).
- Means not accepting everything we read, see and hear as an indisputable fact.
- Is **reflecting** critically on learning experiences and processes
- Is a **deliberate process** of applying logic and reasoning to our thinking. This process *is often unconscious* when one is practised / is experienced in critical thinking.

## Critical Thinking: What it means in particular?

World without Critical Thinking:

→ no development, no innovations:

Realisation that the world is spherical, women's rights of vote, civil rights movement, air travel, the internet, mobile phones, .... many other world-changing developments would never have happened without critical thinkers who were willing to challenge the accepted view of the world.

# Critical Thinking: What it means in particular?

Fictitious example:

Initiative: Open the public libraries on Sunday!

Answer 1: Why? I don't know anyone who goes to a public library. And no one, not even library employees, should have to work on Sunday.

→ limited critical thinking

Answer 2: Who demands this? Why is this demanded?

Staff costs are higher on Sunday. Can my city pay for it? How many people use libraries anyway?

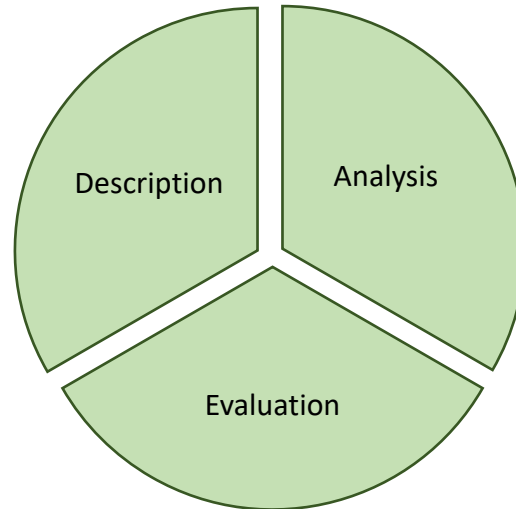
Museums are open on Sunday, supermarkets are closed: What does this difference mean for libraries? ...

# A Model of Critical Thinking

Questions such as:  
What? Where? Why?  
Who?

→ helps you establish the background and context

→ Questions lead to descriptive answers; ability to describe something is important



Questions such as: How?  
Why? What if?

→ helps to examine processes, reasons and causes, and the alternative options.

→ Questions helping to break something into parts and consider the relationship between each part and each part to the whole.

Questions such as: 'so what?' and 'what next?'

→ helps to make judgments and consider the relevance, implications, significance and value of something

→ Questions / judgements lead to reasonable conclusions, solutions, or recommendations

# A Model of Critical Thinking: Description

Questions such as: What? Where? Why? Who?

→ helps you establish the background and context

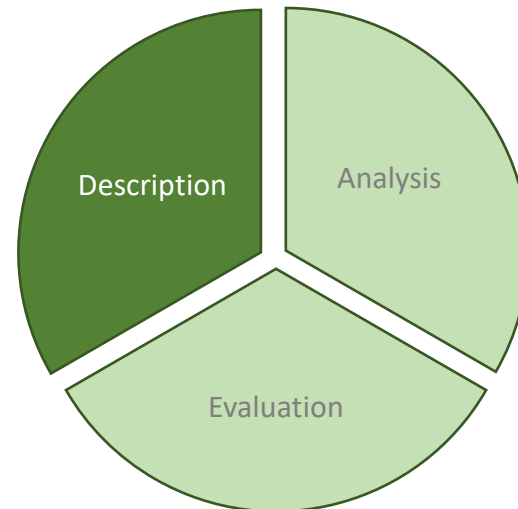
→ Questions lead to descriptive answers; ability to describe something is important

reading an article / post → questions such as:

Who wrote this? What is it about? When was it written? What is the aim of the article?

thinking about a problem → questions such as:

What is this problem about? Who does it involve or affect? When and where is this happening?





# A Model of Critical Thinking: Analysis

Questions such as: How? Why? What if?

→ helps to examine processes, reasons and causes, and the alternative options.

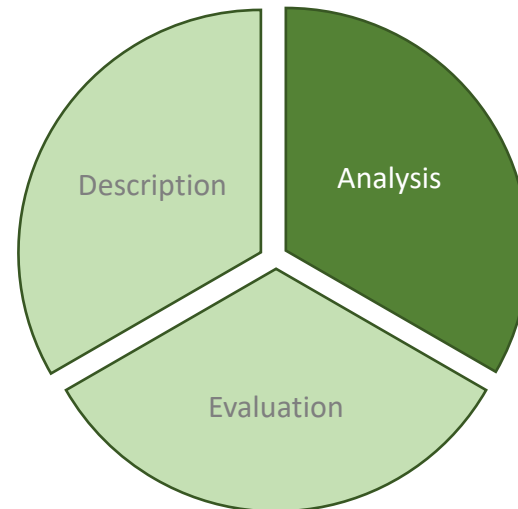
→ Questions helping to break something into parts and consider the relationship between each part and each part to the whole.

reading an article / post → questions such as:

How was the research conducted? Why is it discussed? What are the alternative approaches, methods, theories, ways to act?

thinking about a problem → questions such as:

What are the contributing factors to the problem? How might one factor impact another? What if one factor is removed or replaced?



# A Model of Critical Thinking: Evaluation

Questions such as: 'so what?' and 'what next?'

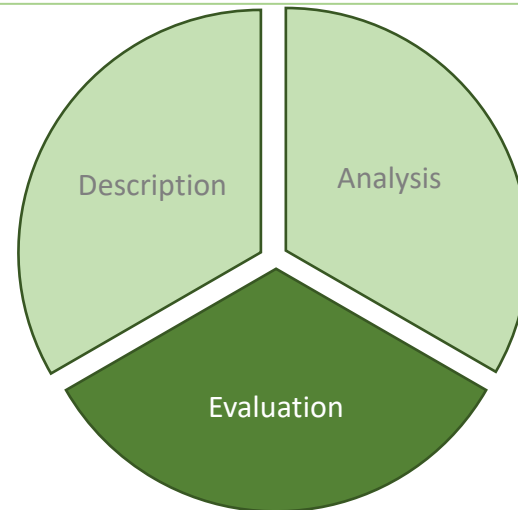
→ helps to make judgments and consider the relevance, implications, significance and value of something

→ Questions / judgements lead to reasonable conclusions, solutions, or recommendations

What do I think about this?

Is it relevant for me / for the problem, I'm dealing with?

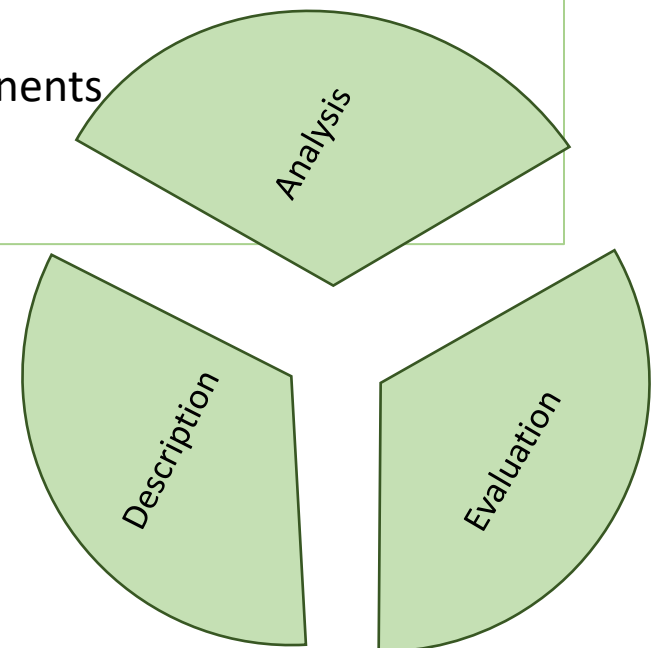
How does this compare to other information I have read?



# A Model of Critical Thinking

- This process *is often unconscious*
- There is no strictly linear way to use; analyse may be first, description second ...
- This model was developed for the higher education sector (critical thinking as a competence for university studies).

➔ Nevertheless it is suitable for presenting components of critical thinking and to *draw conclusions* for adult learning and education.



# Conclusions for Adult Learning

Some possible conclusions for adult learning

Critical Thinkers **are**:

- open minded
- curious
- They don't just start from their own experiences or emotions.
- They look for evidence and arguments to support their point.
- They are willing to change their minds and long-held beliefs in the face of new, compelling evidence.
- Challenging for adult educators, trainers ..., because our information, materials, approaches, methods ... can also be questioned. We should be open to this.

# Conclusions for Adult Learning

Some possible conclusions for adult learning

To become a critical thinker one **needs**:

- The ability to describe problems and situations objectively (not describe their own lives )
- Awareness of the value of other opinions, solutions and approaches, in order to develop and advocate their own opinion / independent solution
- Understanding of the relevance or irrelevance of information.
- Awareness that they can present their positions, opinions, proposals, solutions more confidently if they have an analytical foundation (that is quite positive in everyday life)

# Implement Critical Thinking in Adult Learning

How to encourage & support critical thinking in adult learning?

Most people think they are critical thinkers. If we were to offer courses to foster critical thinking - who would come?

# Implement Critical Thinking in Adult Learning

## How to encourage & support critical thinking in adult learning?

Some suggestions:

- Methods that encourage independent thought and action, discussion (appreciation of other perspectives) and personal expression. For example, project work in smaller or larger groups.
- Methods that encourage self-reflection such as keeping a learning journal or asking at the end of a lesson: "What has been your main takeaway from this lesson and why?"
- Promote relevance: Brainstorming - individually or in a group - is a good method to reveal different thoughts and perspectives and to open up minds. Participants can prioritise the results of the brainstorming according to relevance (importance for a topic or a person) and explain why they consider certain points more important than others.

# Implement Critical Thinking in Adult Learning

How to encourage & support critical thinking in adult learning?

Some more suggestions:

- Think of different learning tasks: Fewer wrong / right tasks, instead provide more sample solutions. In this way, the participants solve tasks independently, check their solutions on their own responsibility and reflect on their learning independently.
- Promote the “Why” and the “Why not”: Don’t always explain the “Why / Why not” but ask for it.



# Resources and further references

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- Critical thinking basics; a tutorial introduces you to the importance of thinking critically in your studies: <https://emedia.rmit.edu.au/learninglab/content/critical-thinking-basics>



Thank you very much - glad  
you were there.

Best regards

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