UNIT 9. Assessment & Self-Evaluation Tools

Structure of the Unit

1. Aim and Objectives;
2. Outcomes
3. Introduction
4. Main CT principles
5. Relationship with WP2
6. Justification
7. Types of Assessment
8. Platforms for Assessment
9. Activities
10. Results & Value of this Unit

Aim and Objectives

This unit aims to present practical and effective assessment tools that help teachers and adult learners measure progress in CT.

OBJECTIVES

1. Identify the aim and role of assessment in CT learning.
2. To present formative, diagnostic, summative, and self-evaluation tools.
3. Present digital platforms (Magic School AI, Socrative, Moodle Quizzes, Google Forms) for CT assessment.
4. Apply rubrics, checklists, and reflection sheets to evaluate CT competencies.
5. Interpret assessment results to support learner progress.
6. Integrate assessment into the e-guide as structured, easy-to-use tools.

Outcomes

An adult trainer will demonstrate an understanding of the assessment role in CT, including familiarity with practical assessment tools and digital platforms for CT competencies evaluation, and the capacity to interpret and analyse assessment results.

Introduction

CT focuses not only on what learners know, but how they think, solve problems, create algorithms, identify patterns, and etc.

Assessment must cover:	Effective assessment includes;	Evaluation tools must be:
• Process • Reasoning • Strategies • Reflection • Creativity	• Guides instruction, • Motivates learners, • Knowledge gaps identification; • Fosters metacognition and self-regulation, • Encourages continuous improvement rather than passive evaluation.	• Accessible, • Simple to use, • Meaningful, • Supportive.

Main CT Principles Applied

All four CT principles are applied in this Unit:

- Decomposition
- Pattern Recognition
- Abstraction
- Algorithms

Relationship with WP2 Modules

WP2 M4 presents „Assessment of Soft Skills development in CT activities". This part discloses such principles as observation, self-assessment, and peer feedback, and provides examples of rubrics and checklists to measure progress without formal testing.
WP2 M3: In the topic "Designing lesson plans and activities" Assessment Techniques, such as peer-assessment and formative assessment, are mentioned.

Justification

Why does CT require unique assessment approaches?

Assessment is not an end-of-course. It's an essential part of the learning cycle.

https://www.evelynlearning.com/top-7-assessment-tools-for-teachers/

Why do adult learners need transparent and supportive assessment?

ach

Adults experience:

- Anxiety related to technology
- Low confidence in mathematics or logic
- Fear of making mistakes
- Strong need for clarity and relevance.

Assessment tools must:

- Build confidence
- Support autonomy
- Encourage reflection rather than judgement
- Provide construc- tive feedback

Types of Assessment

Types of Assessment	Usage	Examples
Diagnostic Assessment	Used at the beginning of a module to measure: • prior knowledge • misconceptions initial CT level	· Socrative entry quiz · Google Forms CT baseline test · Sorting tasks ("Arrange steps of an algorithm in order") · Pattern recognition puzzles
Formative Assessment (Ongoing Assessment)	• Regular • Low-pressure • Highly specific	· Exit tickets ("What was most difficult today?") · Think-aloud protocols · Observation checklists · Peer review · Self-evaluation sheets · Short quizzes (ungraded)
Performance-Based Assessment	Learners demonstrate skills through actions.	· Creating a flowchart · Solving a logic problem · Modelling a process
Summative Assessment (Final Evaluation)	Used at the end of a topic or module to measure achieved learning outcomes.	· Structured test (multiple-choice, open questions) · Practical task: "Create an algorithm to solve..." · Portfolio of work

Platforms for Assessment

MAGICSCHOOL

assists in designing high-quality assessment tasks aligned with higher-order cognitive skills.

socrative

enables real-time collection of student responses through quizzes and open-ended questions.

moodle

quizzes provide a flexible and robust assessment environment capable of supporting complex and multi-step problem-solving tasks.

Google Forms

offers a user-friendly environment for creating structured assessments and collecting large-scale learner data.

Comparison of Different Assessment Platforms

Question Type	Magic School	Socrative	Moodle Quizzes	Google Forms
Multiple Choice	Yes	Yes	Yes	Yes
Dichotomous	Yes	Yes	Yes	Yes
Matching	Yes (AI-generated)	No	Yes	Yes
Ordering	Yes (AI-supported)	No	Yes	Yes

Activity 1: Diagnostic Assessment

CT Diagnostic Assessment with Digital Tools

Goal. To identify learners' initial CT knowledge before trainings.	Outcome. Learners understand their starting point, and trainers can adapt upcoming lessons.

Procedure:

- The trainer creates a 10–15-item diagnostic quiz.
- Learners complete the quiz individually or after discussion in a group.
- The trainer identifies which CT concepts are clear and which require more instruction.

Focus of the Quiz

To identify, analyse, and respond to disinformation context applying CT principles.

Estimated time: 25–30 min

Diagnostic test quiz offline

The adult teacher can print out the quiz in different forms

The tasks can be completed individually and in groups

Diagnostic quiz example online

Socrative.com*

Code: SOC-UMDPJLRZ

*If you use Socrative for the first time, you will have to create at first your account in this platform. Than you can add this quiz to your library.

Example of the diagnostic test you can find here (pdf).

Activity 1: Diagnostic Test Offline

How to perform a diagnostic test offline?

1 EXAMPLE

An Individual Task

Means of work: a board on which will be written the question and different colours of sticker notes.
Process. Write questions on the board and ask the adult learners to write the right answer on the sticky note. Then ask learners to come to the board and stick these notes with the correct answers to the questions, and then discuss.
Recourses

2 EXAMPLE

An Individual Task

Means of work: printed questions with possible answers and different colours of sticker notes.
Process. When the questions are printed with possible answers, handouts with questions and possible answers are distributed to learners; the learners have to mark the right answers, and after this to discuss with the mentor and other participants about the choices.
Recourses

3 EXAMPLE

Group Task

Means of work: printed questions separately (on one page, one question) and different colours of sticker notes.
Process. Print every question separately and ask the learners to discuss in groups and to choose the right answer. The correct answer can be given verbally, written on the sticky note, and stick to the question. A group member can present a common opinion.
Recourses

Activity 2: Formative Assessment

AI-Supported Formative Assessment with Adaptive Feedback

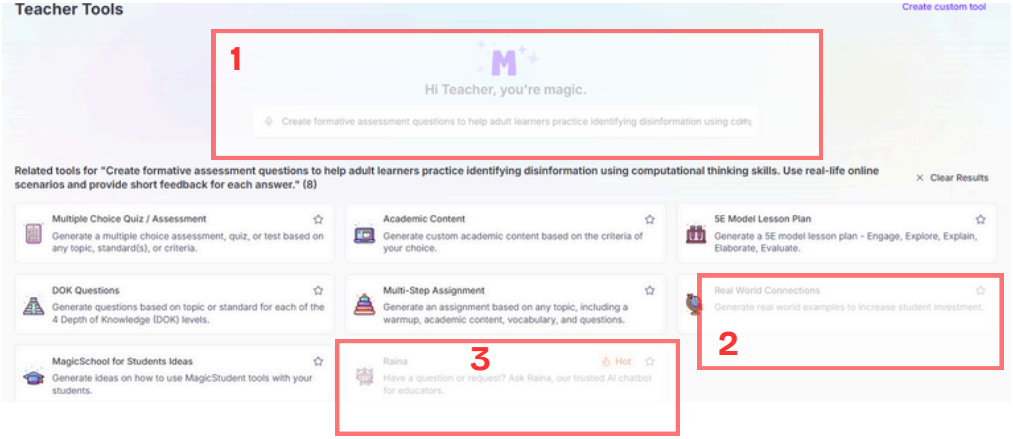
Goal. To assess learners' CT knowledge during the teaching process.	Outcome. Learners identify how the learning process works; trainers can modify particular tasks based on adaptive feedback.

How to use MagicSchool* for CT principles implementation in the disinformation analysis context?

1 STAGE

Suggested Prompt: "Create formative assessment questions to help adult learners practice identifying disinformation using computational thinking skills. Use real-life online scenarios and provide short feedback for each answer."

The adult trainer has to write the prompt into the window in the center of window.

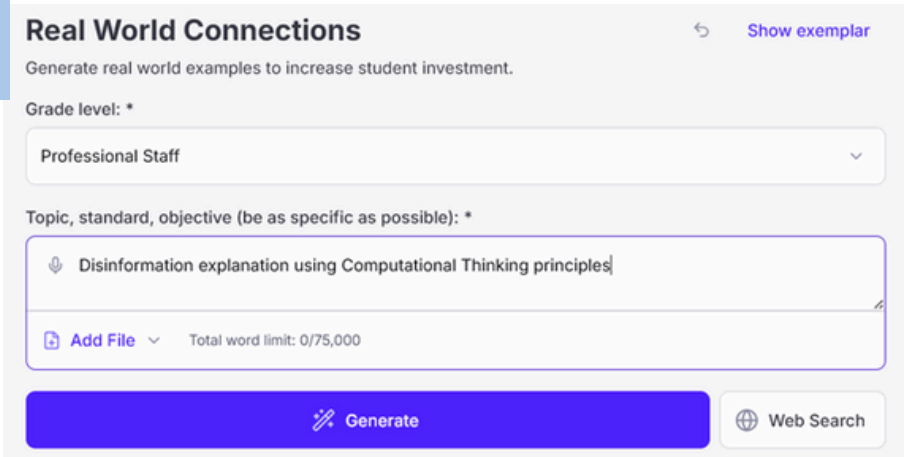


*If you use MagicSchool for the first time, you will have to create at first your account in this platform.

Activity 2: Formative Assessment

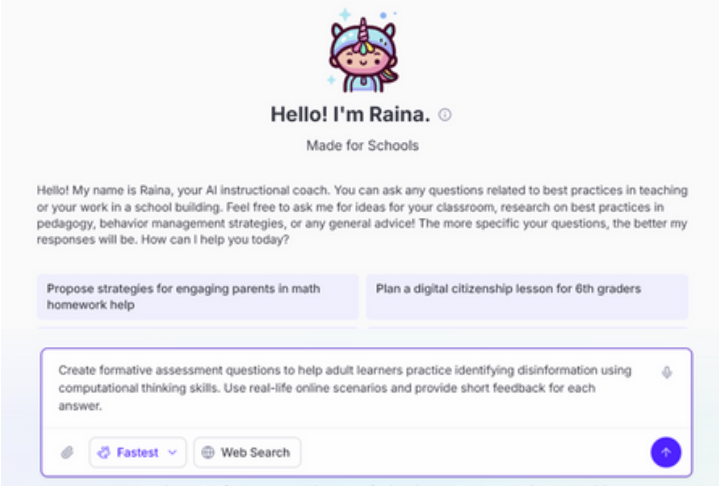
STAGE 2

Firstly, teacher chooses a tool “Real World Connections”, defines topic and AI generates answers.



STAGE 3

Raina chatbot. It generates questions with feedback. Prompt: “Create formative assessment questions to help adult learners practice identifying disinformation using computational thinking skills. Use real-life online scenarios and provide short feedback for each answer.”



Activity 3: Performance-Based Assessment

Goal. To assess learners' CT knowledge during activities, such as in real-world or simulated situations, solving.

Outcome. Applying knowledge and skills, learners demonstrate competencies for project implementation, presentations, or problem-solving.

How to Prepare Information Reliability Task?

Purpose

This task, "Verify Before You Share" assesses learners' ability to apply CT skills in real-life situations by verifying online information and making evidence-based decisions.

Scenario

You receive a viral online post (article, social media message, or short video) that claims to 1
present important information (for example, related to health, politics, or finance).

Preparation

Before sharing it, you must decide whether the information is reliable.

Task for Learner

Using CT, verify the information step by step and explain how you reached your conclusion.

Activity 3

Learners should apply such CT principles:

1. Decomposition

Break the claim into clear components:

- What is being claimed?
- Who published or shared it?
- What evidence is provided?
- What is the purpose of the post?

2. Pattern Recognition

Identify observable indicators related to reliability, such as:

- presence or absence of sources,
- Repeated claims found elsewhere,
- similarity to known misleading content,

lack of verifiable data.

3. Abstraction

Focus only on essential information needed to verify the claim:

- ignore design, formatting, or presentation style,
- concentrate on facts, sources, and evidence.

4. Algorithmic Thinking

Describe the verification process in clear steps, for example:

1. Identify the original source.
2. Check the publication date.
3. Compare the claim with trusted sources.
4. Verify images or videos if applicable.

Evaluate the consistency of information.

Continued on the next page

Activity 3

Assessment Format (Teacher selects one)

- Written report (500–700 words)
- Slide presentation (5–7 slides)
- Oral explanation (5–7 minutes)

Recommended Tools

Primary Tools

Moodle (Assignment / Workshop) – submission and rubric-based evaluation
Google Docs or Slides – structured work and collaboration

Tools Support (not graded)

- Fact-checking websites
- MagicSchool – drafting and feedback support

Reflection (Required)

Learners briefly answer:

- Which step of verification was most challenging?
- How will you use this process in real life?

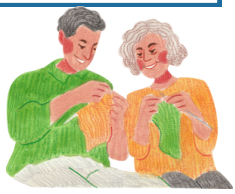
Assessment Criteria (Rubric Overview)

CT skills:

- Decomposition
- Pattern recognition
- Abstraction
- Algorithms (Algorithmic thinking)

Measurement of skills:

- Excellent
- Satisfactory
- Needs Improvement



Activity 3: Summative Assessment

Relationship of summative sssessment with CT principles

CT Skill	Excellent	Satisfactory	Needs Improvement
Decomposition	Claim is clearly broken into all key components (claim, source, evidence, purpose). Each part is explained accurately.	Most components are identified, but some details are unclear or incomplete.	Key components are missing or not clearly identified.
Pattern Recognition	Identifies clear indicators related to reliability (e.g. sources, repetition across platforms, consistency with trusted information).	Identifies some indicators, but analysis is limited or partially developed.	Indicators are not identified or are incorrectly interpreted.
Abstraction	Focuses only on essential facts and verification needs; irrelevant details are successfully ignored.	Mostly focuses on key information, but includes some unnecessary details.	Struggles to distinguish essential information from non-essential details.
Algorithmic Thinking	Verification process is presented as clear, logical, and complete step-by-step actions.	Steps are logical but partially incomplete or not clearly ordered.	Steps are unclear, missing, or not logically connected.

Activity 4

Summative Assessment

Goal. At the end of a topic or module to measure the achieved learning outcomes.	Outcome. Learners identify what they have learned throughout the course.

Examples:

- Final project demonstrating CT principles
- Structured test (multiple-choice, open questions)
- Practical task: “Create an algorithm to solve …”
- Portfolio of work

Tool	Suitability for Summative Assessment	Role
Moodle	★★★★★	Main final evaluation
Project-based (Moodle/Docs)	★★★★★	Authentic assessment
Google Forms	★★★★	Alternative / flexible

Challenges

Assessment materials that match adult learners' needs

It may be challenge for adult trainers to prepare assessment tasks that are practical, realistic and age-appropriate, while still measuring key competences and learning outcomes.

Suitable digital tools for assessment and self-evaluation

Adult trainers struggle to choose tools that are easy to access and use (especially for older adults), while still supporting quizzes, surveys, self-assessment and feedback collection.

Continuous formative assessment

Adult trainers need to plan activities where they can observe progress during learning, not only at the end, and adjust support based on learner performance.

Clear assessment criteria

It can be challenging to define simple and understandable criteria so adult learners clearly know what is expected and how their work will be evaluated.

Summative assessment with limited time

It may difficult for adult trainers to combine performance-based assessment with summative assessment and meaningful reflection within a limited training schedule.

Aditional Resources

Resources:

- Types of assessment
- List of digital assessment tools

Video links:

- How does disinformation work?
- How to understand Misinformation, Disinformation and Malinformation?
- Disinformation: The End of Humanity?

Downloadable activity templates:

- CT Diagnostic Assessment Quiz (file CTDiagnosticAssessment.docx containing quiz questions that can be transferred to various digital assessment tools)

Real-life case examples

- AI deepfakes of real doctors spreading health misinformation on social media
- Disclose.tv: Conspiracy Forum Turned Disinformation Factory

Examples of unplugged and digital activities

Inclusive, culturally-aware content

What is the value of this stage?

This unit present essential types of assessment in CT:

- Diagnostic Assessment
- Formative (Ongoing Assessment)
- Performance-Based Assessment
- Summative Assessment (Final Evaluation)

This unit present presents and compare different digital assessment platforms such as:

- Magic School
- Socrative
- Moodle Quizzes
- Google Forms

This unit supports adult trainers:

- Providing practical examples of knowledge assessment tools online and offline;
- In building confidence and cognitive awareness of adult trainers.