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How to Develop Learning Skills

A Guide to the E-learning Course

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How to Develop Learning Skills

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Introduction

How to use this course

This educational package has been created for primary school teachers who wish to systematically develop their students' learning competencies – both during lessons and in extracurricular activities.

The course is designed to be used:

- As an e-learning course
- As a classic textbook in PDF format

Both formats contain the same modules, lessons, exercises, and tasks.

Course structure

The course consists of 8 modules. Each module is divided into lessons. Each lesson includes:

- An explanation
- An exercise for the participant
- A task or self-reflection
- A short quiz or comprehension check

The course concludes with a final project – preparing your own lesson.

Who is this course for?

The course is intended for:

- Primary school teachers (grades 1–5)
- Teachers working in extracurricular activities
- Teachers who want to strengthen student autonomy in learning.

No special prior skills are required. Correct answers for the exercises can be found in the appendix.

Symbols used

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Think about it _

 notes

 Summary

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H MODULE 1: What is learning competence?

Goal:

After completing the module, the participant:

- Understands the concept of learning competence
- Understands its importance for modern education
- Is able to distinguish between "learning" and "self-directed learning"
- Understands the teacher's role in developing this competence

1. Why is just "learning" not enough today?

- Think about it



When you need to learn something new, what do you do first?

- I start reading
- I look for a video
- I try trial and error
- I ask someone
- I don't know

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You have just started reflecting on your own learning, and in doing so, you have begun to develop your learning competence.

Society is constantly changing, and these changes have a fundamental impact on education as well. Today's school is unable to provide all the knowledge needed for a lifetime. Therefore, it is important for an individual to be ready to:

- Continue learning even after graduation
- Adapt to new situations
- Acquire new knowledge independently

Traditional teaching focuses mainly on what the student should learn (memorizing concepts, facts, and procedures). Less attention is paid to *how* the student learns. However, in a dynamic world, having a large amount of knowledge is not enough. The ability to learn new things independently is of key importance. That is why "Learning to Learn" is one of the key competencies of modern education.

Exercise 1

Choose the correct statements:

- School will prepare us for everything we will ever need
- One should learn throughout their entire life
- Memorization is the most important thing
- The ability to learn new things is of key importance

2. What does learning competence mean?

Learning competence is one of the key competencies for lifelong learning. It is essential for:

- Active citizenship
- Social integration
- Finding employment
- Personal development

It signifies the ability to:

- Plan one's own learning
- Persist in learning
- Effectively search for and select information
- Manage time
- Check for understanding
- Choose appropriate learning strategies
- Evaluate one's own progress
- Learn from mistakes

Elements of "Learning to Learn" competence

Traits	Skills	Attitudes
Knowledge of learning methods	Self-regulation	Positive attitude towards learning
Awareness of strengths and weaknesses	Time management	Motivation
Awareness of educational opportunities	Discipline and perseverance	Self-confidence
	Information literacy	Willingness to grow
	Concentration	
	Critical thinking	

In other words:

It is not about how much a student learns, but how they learn it.

Competence as a learning philosophy

Learning competence is not just a collection of skills. It represents an approach in which the student is an active participant in the learning process. An important role is played by:

- A school that creates a stimulating environment
- Parents who support their children's independence
- Students who develop their own responsibility for learning

Exercise 2

Match the content to the respective concepts.

1. planning the study	A: The ability to find relevant and reliable sources of information. Example: In addition to a textbook, I will use a specialized article, a video, or a teacher's explanations.
2. Time management	B: The ability to choose the learning method that suits me best. Example: Some learn better by reading, others by drawing diagrams or discussing with others.
3. Information searching	C: The ability to organize time for studying and maintaining focus. Example: I plan 30 minutes for reading a

	text, then a short break, and then a review.
4. Strategy selection	D: The ability to perceive a mistake as an opportunity for improvement. Example: When I make a mistake on a test, I check why it happened and try to understand it.
5. Progress assessment	E: The ability to think through what I need to learn and where to start. Example: Before starting to study, I set a goal for myself, divide the topic into smaller parts, and decide which sources I will use.
6. Learning from mistakes	F: The ability to check if I understand the material and if I am making progress. Example: After reading a chapter, I try to explain in my own words what I have learned.

2. Reproduction and transformation of knowledge

Learning can take two forms:

Reproduction

→ memorizing information

Transformation

→ understanding connections

→ ability to apply knowledge

→ discovering relationships between
phenomena

The development of learning competencies occurs primarily during the transformation of knowledge.

Exercise 3

→ look for connections

Transformation

Assign the elements to the appropriate categories.

Reproduction	→ to understand the definition → to memorize the definition
Transformation	→ To learn by heart → To use the knowledge in practice

*C Exercise 1.1 – my learning experiences

Recall a situation where, as an adult, you learned something new (e.g., new software, a foreign language, a work procedure).

Write down/answer:

- What helped you in your learning?
- What hindered your learning?
- How did you realize that you understood the material?

Notes

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4. Self-regulated learning

Self-regulated learning is a way of learning in which the pupil or student has active control over how they learn – that is, they plan, direct, and evaluate their own learning process.

What does this actually mean?

Simply put: "I know what I want to learn, I know how I will learn it, and I am able to assess whether I succeeded."

3 basic stages of self-regulated learning (Barry Zimmerman):

1. Planning (before learning)

- I set a goal for myself (e.g., "I will learn the multiplication table up to 7")
- I choose a strategy (I repeat, I solve examples, I draw visual aids)
- I estimate the time and the level of difficulty

2. Control (during learning)

- I focus, I monitor myself
- I apply various strategies (taking notes, highlighting, explaining the material to myself)
- I solve problems ("This isn't working for me, I will try a different way")

3. Self-assessment (after learning)

- Did I succeed?
- What helped / did not help me?
- What will I do better next time?

What does it consist of?

Self-regulated learning consists of several elements:

- Cognitive – how I think (memorizing, understanding)

- Metacognitive – I reflect on my own thinking ("Do I understand this?")
- Motivational – I want to learn, I believe in myself
- Behavioral – I organize my time, my environment

Why is it important?

Students who are able to self-regulate:

- are more independent
- learn better even without a teacher
- achieve better results in the long term
- cope better in new situations

How to develop this in students?

- In practice (also in your lessons):
- allow students to set their own goals
- use questions such as:
 - o "How did you learn this?"
 - o "What helped you?"
- incorporate (scale, reflection) self-assessment
- teach them concrete learning strategies
- give students the freedom to choose how they work

A simple example for a student

"Today I will learn 5 new words. First, I will read them, then I will write them down, and finally, I will try to repeat them"

without help. At the end, I will check how much I remembered."

🟡 Exercise 4

Assign the correct action to the phase of learning and arrange the pairs in chronological order.

Phases: Self-assessment, planning, monitoring process,

Activities: I evaluate what I succeeded at; I set a learning goal for myself; I check if I understand the material 1. 2. 3.

5. Learning vs. learning how to learn

🟡 Exercise 5

Assign the correct processes to individual elements. What is learning? What is learning how to learn?

I memorize the material – I know what I have learned – The teacher checks my knowledge – I can plan – I know how to learn – I wait for instructions – I will complete the task – I understand the purpose of the task – I can assess myself – I will receive a grade

Learning	Learning how to learn

◆ Notes

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Our task is to move students from the "I am learning" stage to the "I am learning how to learn" stage.

6. Why is this important?

This competence allows an individual to:

- Adapt to changes
- Engage in effective lifelong learning
- Approach information critically
- Plan their studies
- Evaluate their own progress
- Develop independence and responsibility

It also supports:

- Coping with stress
- Coping with exams
- Coping in new situations

Students with developed competence:

- Are more persistent
- Handle new situations better

- Can help themselves independently
- Have greater internal motivation

Without it, learning turns into the mechanical performance of tasks.

Exercise 6

Which statements apply to students with a developed learning competence?

- Are more persistent
- Handle new situations better
- Need constant guidance
- Have greater motivation

7. How to achieve this

One effective way is inquiry-based teaching. It helps develop competence because the student:

- Actively seeks solutions
- Thinks critically
- Perceives connections
- Uses various strategies
- Learns to solve problems

The student does not receive ready-made solutions but learns to think independently.

The result of this is:

- Deeper understanding of the material

- Greater motivation
- Greater interest in learning
- Ability to adapt to conditions

Other effective methods:

- Project-based learning
- Problem-based learning
- Collaborative learning
- Reflective exercises
- Portfolio
- Self-assessment

*C **Exercise 1.2 – My teaching experiences**

Reflect on your students:

- Can they identify what they do not understand?
- Can they plan their learning?
- Can they check their own work?

Write down at least three observations.

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8. What does the teacher do?

The teacher's task is not just to transfer knowledge, but to help students become independent learners. The teacher can support the development of competencies through:

Teaching the learning process

- taking notes
- mind maps
- planning studies
- review techniques

Supporting reflection

Questions for students:

- What did I manage to learn today?
- What did I not understand?
- Which learning method was effective for me?

Preferring formative assessment

- portfolio
- rating scales

- learning journals
- feedback on progress

Creating a safe environment

- respect for students' pace
- openness to questions
- mistakes as part of the learning process

Supporting peer learning

Fellow students can often explain the material in a more understandable way.

Differentiated instruction

- various types of tasks
- possibility to choose methods
- respect for individual pace

Supporting internal motivation

- project-based learning
- problem-based tasks
- connection to real life

➤ Summary

🕒 Exercise 7

Complete the text.

The competence of students'

..... is the ability to

.....

..... their own learning independently. It is the basis for independence, adaptability, and lifelong learning

..... It helps in adapting to changing

❓ Checking understanding – Module 1

🕒 Exercise 8

Choose the correct answer.

1. The competence of "learning to learn" means:
 - a) learning faster
 - b) the ability to manage one's own learning
 - c) having a good memory
2. Why is this competence important today?
 - a) because of tests
 - b) due to rapid changes in the world
 - c) because of grades

H Module 2 Motivation, autonomy, and internal learning

◆ Objective

Upon completion of the module, the participant:

- understands the role of motivation in learning
- knows the difference between intrinsic and extrinsic motivation
- understands the three basic psychological needs related to learning
- knows how to support students' intrinsic motivation

1. Why do students not want to learn?

Teachers often encounter situations where students:

- work only for grades
- give up quickly
- avoid difficult tasks
- wait for precise instructions

Such behaviors are sometimes described as laziness or a lack of interest. In reality, however, it is often a motivation problem.

Learning is a difficult task.

It requires focus, effort, perseverance, and a readiness to make mistakes. If a student:

- does not see the point in learning
- does not feel safe

motivation naturally drops.

Motivation is crucial for the development of learning competence.

A student can direct their learning only when they have a reason to learn.

Exercise 1

Decide whether the statement is true or false: ☐  true + false 

1. Students are unmotivated mainly because they are lazy. ☐  
2. Motivation influences the willingness to learn. ☐  
3. Learning is a simple activity that requires no effort. ☐  

2. What is motivation?

Motivation (from Latin *movere* – to move) is an internal force that stimulates a person to act.

In education, it refers to internal and external factors that activate student behaviors toward learning.

Exercise 2

Motivation is a force that..... to act.

3. Internal and external motivation

Motivation can have two main sources.

Internal motivation

The student learns:

- out of curiosity
- out of interest
- for their own satisfaction

External motivation

The student learns:

- for grades
- for praise
- to avoid punishment

In education, it is important to develop both types of motivation and gradually support the transition to intrinsic motivation.

Student motivation depends primarily on the teacher's approach.

It is supported by:

- developing student autonomy
- supporting independence and collaboration
- creative and meaningful tasks
- space for ideas and discussion
- humanity and respect
- interesting forms of teaching
- clear learning goals

Exercise 3

Match. What is external motivation? What is internal motivation?

I want to understand this – I want to get a good grade – I will avoid punishment – I learn independently – I am interested in this

Internal motivation	External motivation

Write down/answer:

- When do you see enthusiasm in students?
- When do they work only to "get it over with"?
- What motivates them the most?

◆ Notes

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4. Three basic needs related to learning

Competence

The student has the feeling:

"I am coping. I am making progress." Motivation drops when the student:

- repeatedly experiences failure
- perceives tasks as too difficult

It is important to:

- assign tasks of an appropriate level of difficulty
- provide motivating feedback

- pay attention to individual needs
- build the belief that a mistake is part of the learning process

Autonomy

The student has the feeling:

"I can make decisions. This learning is also mine."

Autonomy does not mean chaos. It means the possibility of choice within clearly defined boundaries. The student:

- can choose the course of action
- understands the purpose of learning
- is not just a passive executor of instructions

Relatedness

The student has the feeling:

"I belong here. Someone cares about how I am doing."

Without safe relationships:

- the student is afraid to make mistakes
- they avoid risks
- they lose motivation

A respectful attitude toward the teacher fosters self-confidence and cooperation.

Exercise 4

Match the content to the individual concepts.

1. COMPETENCE	B: I am coping with this.
2. AUTONOMY	C: I can make a decision.
3. RELATEDNESS	A: I belong here.

C* Exercise 2.2 – Map of needs

Complete the table.

- a) 3 didactic situations serving to develop competence, autonomy, and relatedness,
- b) 3 didactic situations that do not develop these needs.

	What develops it	What does not develop it
Competence		
Autonomy		
Relatedness		

5. How external motivation becomes internal

Students often learn due to external motivation:

- for grades
- for praise
- to avoid punishment

Our goal is for students to learn for themselves.

This process is called internalization.

It occurs when a student has their learning-related needs met:

- they understand the purpose of learning
- they have the opportunity to choose
- they experience success
- they feel accepted

Self-Determination Theory (Richard M. Ryan and Edward L. Deci) states:

1. Motivation is a continuum – from externally regulated to autonomous.
2. The quality of motivation is key, not its strength.
3. Intrinsic motivation leads to:
 - deeper understanding
 - greater perseverance
 - active student engagement

The student becomes a co-creator of the learning process:

- they know the learning goals
- they can influence progress
- they track their progress

Learning becomes their own activity.

This is the basis of the "learning to learn" competence.

6. The role of the teacher

We do not build motivation through greater control, punishments, or orders. We build it by creating an environment where:

- it is safe to make mistakes
- success is visible
- students have a voice
- feedback is constructive
- learning makes sense

The teacher plays a key role in supporting student autonomy and transforming extrinsic motivation into intrinsic.

Summary

Ç Exercise 5

Complete the text.

..... is the basis of learning. If the needs for
.....
..... competence, autonomy, and
relatedness are met, students take
..... responsibility for their learning
and learn from their own

Checking understanding – Module 2

Exercise 6

Choose the correct answer.

1. Intrinsic motivation appears when the following are met:
 - a) signs and control
 - b) competence, autonomy, relatedness
 - c) results and comparisons
2. Autonomy means:
 - a) doing whatever I want
 - b) having the possibility of choice within the rules
 - c) having no rules at all

Module 3 Metacognition – how the student thinks about their own thinking

Objective

 Upon completion of this module, the teacher:

- understands the concept of metacognition
- distinguishes between efficiency and metacognitive learning
- is able to formulate metacognitive questions
- is able to plan a metacognitive element within their own lesson
- is able to use a mistake as a learning tool

1. What is metacognition?

  Think about it



A student can learn even without thinking about how they are learning. It is precisely this ability to observe one's own thinking, understanding, and progress that we call metacognition. Metacognition means thinking about one's own thinking and managing one's own learning.

When a student learns, two processes occur simultaneously:

- learning itself (reading, counting, solving tasks, writing a test),
- observing and controlling the learning process (do I understand? should I change my approach? do I need help?).

It is this second process that we call metacognition. Without it, the student is working, but they do not know if they are truly learning.

Metacognition is the difference between the statements:

"I have completed the task" and

"I understand this and can apply it."

It is important because it helps the student:

- plan their learning
- check whether they have understood something
- change their strategy when it is not working
- learn from mistakes

Without metacognition, the student is working, but they do not necessarily know if they are truly learning.

🔄 Exercise 1

Complete the text.

Metacognition means thinking about one's own
..... and one's own
learning.

2. Achievement vs. metacognitive learning

Metacognition is the difference between the statements:

- "I have completed the task."
- "I understand this and can apply it."

The first statement refers to results.

The second shows that the student is reflecting on their understanding.

🔄 Exercise 2

Divide the sentences into the appropriate categories.

I wrote the test – I completed the task – I understand this – I
know what strategy I used – I filled in the answer – I know
what did not work for me

Efficiency	Metacognitive learning
------------	------------------------

3. Two elements of metacognition: cognition and regulation

Metacognition consists of two basic parts: metacognitive knowledge and metacognitive regulation.

Metacognitive knowledge

Metacognitive knowledge means that the student is aware of their own cognitive processes, learning strategies, and skills. It includes knowledge of how they learn best, what facilitates or hinders their learning, and which strategies are effective for different tasks.

In a school environment, this means that the student:

- knows various learning strategies,
- knows what helps them,
- understands their strengths,
- is able to identify areas where they need to improve,
- is able to recognize typical mistakes in their learning.

Example:

"When I take notes in different colors, I remember them better."

Metacognitive regulation

Metacognitive regulation includes the ability to plan, monitor, and adjust one's own learning while working on a task. The student sets a goal for themselves, chooses an appropriate procedure, tracks their progress, and changes their strategy if necessary.

This means the student is able to:

- plan,
- check if they understand everything,
- control their progress,
- change strategy when it is not working.

Example:

"I don't understand this; I will try to explain it in my own words."

Developing this skill makes students able to solve both simple and complex problems more effectively and gradually take responsibility for their own learning.

Exercise 3

Complete the sentence.

When a student plans, monitors, and adjusts their goals, it is

When a student knows how they learn, what helps them, and where their weaknesses lie, it is

Exercise 3.1 – How I learn

Recall a situation from the last year when you were learning something new (e.g., new software, a language, a work procedure, or a sports activity).

Answer the questions:

- How did you plan your actions?
- Did you know how much time you would dedicate to it?
- How did you check if you understood everything?
- What did you do when it didn't work out?
- Did you change your strategy? Why?
- When did you realize that you had truly learned it? Focus on the learning process, not the content.

Notes

[illegible]

4. The metacognitive learning cycle

Metacognition is not a one-time action. It is a process that accompanies learning in three basic phases:

- before learning – planning
- during learning – monitoring
- after learning – evaluation

Before learning – planning

The student asks themselves:

- What am I supposed to learn?
- What do I already know?
- How will I proceed?

The teacher's task is:

- to clearly formulate the goal,
- to activate prior knowledge,
- to give students the opportunity to estimate the difficulty level of the task.

Practical example:

Before reading a specialized text, the teacher will not just say "Start reading," but will ask:

- What do we already know about this topic?
- What do you think will be the most difficult?
- What should we focus on while reading?

During learning – monitoring

The student asks themselves in real-time:

- Do I understand well?
- Is my strategy working?
- Do I need to change my approach?

The teacher's task is:

- to consciously pause the process,
- to ask questions regarding the procedure,
- to create space for a change of strategy.

Practical example:

Students are solving a math problem. Instead of the question:

"Who has the result?"

the teacher will say: "Let's pause. Check if you understand every step. If not, mark the place where you have doubts."

After learning – evaluation

The student asks themselves:

- What have I learned?
- What helped me?
- What would I do differently?

The teacher's task is:

- to guide students to name the process,
- to analyze mistakes,
- to support the proposal of the next step.

🔄 Exercise 4

List/write down the stages of the metacognitive learning cycle in the correct order.

Before learning:

During learning:

After learning:

🕒 Exercise 5

Which questions belong to the planning phase?

- What do I already know about this?
- How will I proceed?
- What would I do differently next time?
- What should I focus on?

🕒 Exercise 6

Decide whether the statement is true or false: ☐ ☒ true + false+

1. The question "Who has the result?" supports monitoring the learning process. ☐ ☒ +
2. The question "Do you understand what you are currently doing?" supports metacognition. ☐ ☒ +

Exercise 3.2 – Metacognitive element in your own lesson

Choose one specific topic from your subject and complete:

- Planning – what question will you ask at the beginning?
- Monitoring – at what point will you consciously pause the process?
- Evaluation – what reflective question will you use at the end?

Write down the specific sentences you would say to your students.

Topic/task:	
Planning – initial question	
Observation – stop	
Evaluation – reflective question	

5. Metacognitive questions

A metacognitive question is not aimed solely at obtaining the correct answer, but at becoming aware of the learning process.

A teacher should be able to distinguish between a content-related question and a metacognitive question.

A. Questions regarding planning (before learning)

These are used at the beginning of a lesson or before a task. Examples:

- What do we already know about this?
- What do you think will be difficult?

- How will we proceed?
- What must we watch out for?
- How will we know that we succeeded?

Their goal is to activate a conscious mindset.

B. Questions for observation (during learning)

These are used while working. Examples:

- Do you understand what you are doing?
- Which step is the most difficult for you?
- Is your strategy working?
- Do you need to slow down or change your approach?
- How will you check that?

Their goal is to stop the automatic execution of a task.

A. Evaluation questions (after learning)

These are used at the end of a lesson or task.

Examples:

- What did you learn today?
- What helped you?
- Where did you make a mistake?
- What would you do differently next time?
- What strategy will you use next time?

These questions help the student move from just giving an answer to thinking.

Example from mathematics, 6th grade:

A student solves a problem correctly. A typical teacher reaction:

"Correct." A metacognitive reaction:

"How did you know that this particular method should be applied?"

"What would have happened if you had chosen a different method?"

Exercise 7

Assign the questions to the individual stages of metacognitive learning.

How will I proceed? What helped you? What will be difficult? What do I already know about this? Do you understand what you are doing? Which step is the most difficult? What would you do differently? What did you learn? Is your strategy working?

Planning	Monitoring	Assesment

🟡 Exercise 8

Separate the content-related questions from the metacognitive questions.

How will you check if you understand this? Why did you choose this method? When did this happen? How much is it? How did you come up with that? What is the result?

Content-related questions	Metacognitive questions

6. Mistake as a source of learning

An error is not a failure. It is information about how a student thinks. Modern learning research shows that dealing with errors is an important part of deep learning. If a student learns from errors, they learn faster, more consciously, and more deeply.

Therefore, the teacher's goal is not just to point out an error, but to help the student:

- understand where it originated,
- determine the reasoning process that led to it,
- find a more appropriate approach.

In this regard, the teacher learns to:

- perceive errors as a diagnostic tool,

- provide feedback that supports the learning process,
- create a safe environment where students are not afraid to try,
- use an error as an opportunity for reflection and changing strategy.

If a student learns from errors, they learn:

- faster
- more consciously
- more deeply

The teacher's goal is not only to indicate the error but to help the student understand:

- where it originated
- why it originated
- what course of action would be more appropriate

🔄 Exercise 9

Determine whether the statement is true or false: ■ true + false

An error is proof of incompetence. ■ +

An error can be a source of learning. ■ +

In the case of an error, it is sufficient to provide the correct answer and continue. ■ +

🔄 Exercise 10

Select the correct statements. What facilitates learning from mistakes?

- Searching for a better course of action
- The opportunity to correct the error
- Indicating the place where the error was made
- Ridiculing an incorrect answer

Reflect on the following:

- How do you react to students' mistakes?
- How could you make greater use of errors as a source of learning?
- Do you give students the opportunity to correct their mistakes?
- Focus on the learning process, not on the content.

__?__?Notes

[illegible]

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7. Metacognition and the "learning to learn" competence

Without metacognition, a student:

- does not know what they are learning,
- does not know how they are learning,
- does not know why they are succeeding or failing,
- is unable to deliberately improve.

A student who develops metacognition:

- is able to learn even without constant supervision,
- is able to navigate a new situation,
- knows how to cope in situations of uncertainty,
- is able to transfer learning strategies to other tasks.

Metacognition is therefore one of the foundations of the "learning to learn" competence.

Practical strategies for developing metacognition

- **Modeling metacognitive strategies**

The teacher thinks aloud while solving a task.

- **Planning and self-reflection**

Before performing a task, students define their expectations, and after completing it, they reflect on what they have learned.

- **Metacognition-supporting questions**

E.g., "How prepared are you for this task?", "Why did you choose this method?", "What would you do differently?"

- **Learning journals and mind maps**

Students record their strategies, achievements, and areas requiring improvement.

- **Process-oriented feedback**

The focus is on the process, not just the result.

Metacognition is the student's internal teacher.

Exercise 11

Assign the strategy to the description.

1. Self-reflection	A: The teacher shows his reasoning aloud
2. Learning register	B: Attention is focused on the proces, not the result
3. Process-oriented feedback	C: The student records strategies and progress
4. Modelling	D: The student defines what he has learned

► Short summary

🕒 Exercise 12

Complete the text.

..... means that the student reflects on how they..... , observes their progress, and is able to change it. This enables them to learning,

.....
..... understanding, learning from and gradually becoming an independent learner.

Check for understanding – Module 3

Exercise 13

1. Metacognition means:
 - a) to remember
 - b) to think about one's own thinking
 - c) solving quickly
2. A metacognitive question is:
 - a) How much is it?
 - b) How did you arrive at this?
 - c) When?
3. An error in the learning process is:
 - a) proof of inability
 - b) something to be completely avoided
 - c) a source of information about how the student thinks

Module 4 Visible Thinking – a culture of thinking in the classroom

Objective

Upon completion of this module, the teacher:

- understands the principles of the Visible Thinking approach
- is able to implement thinking routines into daily teaching
- understands how to build a culture of thinking in the classroom
- understands the relationship between visible thinking and the competence of learning to learn

Visible Thinking is an approach that originated as part of the Project Zero research project at Harvard University.

1. What is visible thinking?

  Think about it



Visible Thinking is an approach aimed at making students' thinking processes visible. It does not focus solely on correct answers, but primarily on how students think, how they reach conclusions, how they argue, and how they analyze their own learning process.

This approach:

- makes students' thinking visible,
- supports argumentation and reflection,
- develops metacognition,
- builds a culture of thinking in the classroom.

The key thought is:

Learning deepens when thinking is made visible, named, and shared.

Exercise 1

Complete the text.

Visible Thinking focuses on making students'
..... visible.

2. Didactic principles

Visible Thinking is based on several fundamental principles that change the way classes are conducted.

1. The process is more important than the result

The teacher does not focus solely on whether the answer is correct, but also on the path the student took to reach it.

2. Questions are more powerful than ready-made explanations

Instead of saying "The correct answer is...", the teacher asks the question: "What makes you think so?" Such a question stimulates thinking, argumentation, and deeper understanding.

3. Routine is more effective than random activities

Thinking develops through regularity. A one-time activity is not enough. Students need repeated experiences in which they name, share, and reflect on their thinking.

4. A safe environment is essential

Students must be certain that they can try, make mistakes, and express their thoughts aloud without fear of being ridiculed. An error is a natural part of the learning process.

 **Exercise 2** Decide whether the statement is true or false:
 true  false+

- In the case of thinking aloud, the most important thing is only whether the answer is correct.  +
- Questions can stimulate deeper thinking.  +
- A one-time exercise is sufficient for the development of thinking.  +
- A safe environment fosters thinking aloud.  +

🍷 **Exercise 3** What fosters the creation of a safe environment conducive to thinking?

- respect for students' answers ? +
- ridiculing mistakes ? +
- space for uncertainty ? +
- possibility of changing one's mind ? +

*C? Exercise 4.1 – What do I see in my classroom?

Reflect/answer/write:

- What do you see most often in lessons – answers or the thinking process?
- How could you check how your students think?
- What questions could you change to reveal the process, and not just the result?

Notes

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3. Thinking Routines

Thinking routines are short, repeatable procedures that prompt students to think. They are not additional tasks, but a way to conduct teaching.

Instead of asking: "What is the answer?"

the teacher asks: "What makes you say that?"

In this way, attention shifts from the result to the process.

Basic thinking routines

1. See – Think – Wonder

Application: for images, text, situations

- Questions:
 - What do you see? (observation)
 - What do you think it means? (interpretation)
 - What are you interested in / what do you not understand? (questions)
- This exercise fosters observation, interpretation, and questioning. It is suitable for various subjects and age groups. It develops curiosity and critical thinking.

2. I used to think..., now I think...

Application: reflection on learning

- Questions:
 - What did I think at the beginning?
 - How has my thinking changed?
- It helps to realize changes in thinking. It is particularly suitable for:
 - reflection on learning,
 - scientific discoveries,
 - evaluation of projects.

3. Claim – Support – Question

- Questions:
 - What is your claim? I claim that...
 - What supports your claim? I support it with the following evidence/arguments...
 - What question arises from this? I ask myself the question...
- It develops argumentation skills.
- It is suitable for:
 - discussion,
 - argumentation,
 - civic education,
 - literature,
 - history...

Procedure:

1. Present the statement.
2. Students formulate a claim.
3. They look for evidence.
4. They create a question that moves thinking forward.
 - Teacher tip: If a student cannot find arguments to support the claim, do not give the answer. Help them by asking the question: "Based on what do you conclude that?"

2. What makes you say that? (What leads you to this conclusion?)

- This is a simple but effective question that allows you to get to know the student's way of thinking. It can be used almost always.
- What do you think / what do you claim?
- What leads you to this conclusion? (What makes you say that?)
- In other words: Opinion + evidence / justification.
- It supports:
 1. justification,
 2. argumentation,
 3. deeper understanding.

3. 3-2-1 bridge

- Reflect on the main topic and find:
- Initial response:
 1. 3 words
 2. 2 questions
 3. 1 metaphor or comparison
- New response:
 1. 3 words
 2. 2 questions
 3. 1 metaphor or comparison
- Bridge: Find connections, move from initial answers to new ones.
- Application: lesson summary, quick and effective reflection.

Exercise 4

Assign the procedure name to its application.

1. LOOK-THINK-CONSIDER	A: reveals the way of student's thinking by justification
2. I USED TO THINK..., NOW I THINK...	B: quick and effective reflection
3. CLAIM – SUPPORT – QUESTION	C: supports observation, interpretation and question making
4. WHAT MAKES YOU THINK SO?	D: develops argumentative skills and critical thinking
5. 3-2-1 BRIDGE	E: is conducive to reflection and getting aware of changing the way of thinking

5. Introducing thinking routines

• Step 1: Choose one routine

To begin with, it is worth introducing only one thinking routine. The "See – Think – Wonder" routine works well as a first choice. It can be applied in almost any subject.

• Step 2: Model thinking

During the first attempts, the teacher should show their own thought process aloud. For example:

- "I see that..."
- "I wonder if..."
- "I am curious about..."

Modeling helps students understand what is expected of them.

- **Step 3: Visualize thinking**

Thinking should be physically present in the classroom space. We can:

- write answers on the board,
- create posters representing the thinking process,
- allow students to write down their reflections,
- use mind maps.

- **Step 4: Reflect on the process**

At the end of the lesson, it is important to evaluate not only the result but also the thinking process itself. Appropriate questions include, for example:

- What helped you think today?
- What was difficult?
- How has your way of thinking changed?

Exercise 5

Arrange the 4 steps for introducing thinking routines in the correct order:

1:

2:

3:

4:

C*❖ Exercise 4.2 – Try out the procedure

Apply the "Claim – Support – Question" routine to the statement:

"Children don't want to learn today." Focus on:

- formulating claims,
- searching for evidence,
- creating questions that challenge the claim or move it forward.

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6. The Eight Cultural Forces of Thinking

For thinking to flourish in the classroom, it is not enough to apply just one routine. The classroom needs a culture that systematically supports thinking.

The eight cultural forces of thinking include:

- **Expectations** – we believe that every student is capable of deep thinking.

- **Language** – we use the language of thinking: prove, explain, justify.
- **Time** – we provide space for reflection.
- **Modeling** – the teacher models their own thought process aloud.
- **Opportunities** – we assign tasks that require thinking.
- **Routines** – we regularly use thinking procedures.
- **Interactions** – we support discussion and collaboration.
- **Environment** – thinking is visible in the classroom, in notebooks, and in conversations.

How to support them in practice

Force	How to support it in practice
Expectations	Assign tasks that require thinking
Language	Use words: prove, justify, explain
Time	Wait at least 5 seconds after asking a question
Modeling	Think aloud
Opportunities	Ask open-ended questions
Routines	Repeat them regularly
Interaction	Discussion in pairs and groups
Environment	Present the results of your reflections

Exercise 6 Assign the force to a specific support.

1. SURROUNDING	A: think aloud
2. TIME	B: pair and group discussion
3. PATTERN	C: presenting the outcome of your thoughts
4. POSSIBILITIES	D: wait at least 5 seconds after asking the questions
5. LANGUAGE	E: ask open-ended questions
6. INTERACTION	F: repeat them regularly
7. EXPECTATIONS	G: use such words as: proof, justify, explain
8. ROUTINES	H: Ask questions which require consideration

Exercise 7 Assign each force its meaning.

Environment	Use the language of thinking
Time	We believe in the student's deep thinking
Pattern	We use repetitive procedures
Possibilities	Thinking is visible in the classroom
Language	We provide space for thinking
Interaction	We support discussion and cooperation
Expectations	The teacher models the way of thinking
Routines	We ask demanding questions

C*? Exercise 4.3 – Classroom self-assessment

Rate your classroom regarding each cultural force on a scale from 1 to 5:

1 = almost non-existent

5 = is a natural part of the classroom

Force	Rating
1. Expectations	
2. Language	
3. Time	
4. Modeling	
5. Opportunities	
6. Routines	
7. Interaction	
8. Environment	

Reflect:

- Which of these forces is the strongest in your classroom?
- Which one would you like to consciously develop?

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9. Visible Thinking and the "learning to learn" competence

When a student can:

- name their thinking,
- track it,
- change it,

they become a more independent learner. Therefore, thinking aloud directly supports:

- metacognition,
- self-reflection,
- argumentation,
- independence in learning.

Its importance lies in the fact that the student becomes not just a performer of tasks, but an active participant in their own learning process.

Exercise 8

What does Visible Thinking directly support? (multiple options)

- metacognition
- self-reflection
- independence in learning
- rote memorization

10. Implementation

When introducing Visible Thinking, the following errors often occur:

- procedures are used only once,
- the teacher expects immediate depth of thinking,
- correctness is evaluated instead of the quality of thinking,
- there is a lack of time for reflection.

It is important to realize that building a culture of thinking is a process. Both students and the teacher need time, repetition, and a safe environment.

Evaluation and feedback

In the case of Visible Thinking, we evaluate not only the result but also the quality of thinking. We pay attention primarily to:

- the clarity of the claim,
- the quality of arguments,
- the ability to ask questions,
- progress in thinking.

Example of appropriate feedback:

"Your claim is clear; try to add concrete evidence."

Such feedback supports further thinking, not just checking for correctness.

Implementation procedure – 3-month plan

Month 1

- introduce one routine,
- model the way of thinking.

Month 2

- add a second routine,
- visualize thinking in the classroom.

Month 3

- introduce reflection,
- conduct a classroom self-assessment.

This method of action helps to introduce the approach gradually and realistically.

Ç Exercise 9

Decide whether the statement is true or false: ■ true + false

1. Visible thinking works even without regular repetition of routine activities. ■ +
2. A culture of thinking is built gradually. ■ +
3. When evaluating, you should pay attention only to the correctness of the answer. ■ +

Ç Exercise 10

1. Which feedback is most appropriate?
 - a) Wrong
 - b) Correct
 - c) Your claim is clear; try to add concrete evidence.

Ç Exercise 11

Put the steps for implementing the visualization of thinking in the correct order.

- introduce reflection
- modeling thinking
- add a second routine
- introduce one routine
- visualize thinking

- conduct a classroom self-assessment

Month 1

1: introduce one routine

2: modeling thinking

Month 2

3: add a second routine

4: visualize thinking

Month 3

5: introduce reflection

6: conduct a classroom self-assessment

Short summary

Exercise 12

Complete the text.

Visible Thinking is an approach that makes students' thinking Through thinking routines , the language of thinking, reflection, and a safe , it helps the teacher develop, argumentation, and the competence of

■ Check for understanding – Module 4

Exercise 13

1. Thinking routines are:
 - a) tests
 - b) ways to guide thinking
 - c) teaching material
2. A culture of thinking means:
 - a) silence
 - b) an environment in which thinking is valued
 - c) discipline



Module 5 Concept-Based Teaching

Objective

Upon completion of this module, the teacher:

- understands the essence of concept-based teaching,
- understands the difference between memorizing facts and understanding concepts,
- is able to explain the importance of knowledge transfer,
- knows a simple example of concept-based learning,
- understands the relationship between concept-based teaching and the competence of learning to learn.

1. What is concept-based teaching?

In today's education, there is an increasing emphasis on the need to shift from rote memorization of facts to a deeper understanding of the material. Many students memorize concepts, definitions, dates, or formulas but are unable to apply them in a new situation.

Therefore, concept-based teaching focuses not only on what a student is learning, but also on why and how individual pieces of information are connected to each other.

The student does not learn isolated facts, but the principles and relationships between them. Thanks to this, they are able to:

- better understand,
- remember them for longer,
- transfer them to new situations.

Such an approach ensures:

- more durable and universal knowledge,
- the development of critical thinking,
- support for independent learning.

In pedagogy, this is also linked to the concept of the "zone of proximal development," described by Lev Vygotsky. According to him, a student is able to cope with tasks that go slightly beyond their current level if they have appropriate support from a teacher or peers. Concept-based teaching also leads the student to understand a principle, rather than just memorize a fact.

Exercise 1

Complete the text.

Concept-based learning focuses on understanding the between pieces of information.

2. Why facts alone are not enough



In your opinion, which happens more often?

- the student memorizes the material and is able to use it
- the student memorizes the material, but is unable to transfer it to a new situation
- the student is unable to memorize the material at all
- the student understands the principle, even if they do not remember all the details

—  Notes

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Rote learning often focuses on memorizing facts, dates, definitions, or formulas. While a student can reproduce them, they are unable to apply them in a different situation. Therefore, concept-based teaching emphasizes three levels of understanding:

Facts – Concepts – Principles

1. Facts

Concrete data, names, formulas, or information.

2. Concepts

Broader notions that connect individual facts, for example:

- change,
- balance,
- system,
- movement,
- relationship.

3. Principles

More general principles that help to understand the world and the connections between phenomena. If a student learns only facts, their knowledge remains limited. If they understand concepts and principles, they can connect their knowledge and use it even outside of a specific task.

🔄 Exercise 2

Assign the content to the corresponding concepts.

1. Facts	A: broader definitions which put facts together
2. Conceptions	B: concrete data, names, information
3. Rules	C: common rules and relations between phenomenons

🔄 Exercise 3

Decide whether the statement is true or false: ☐ true ☒ false

1. If a student can memorize a definition, they automatically understand it. ☐ true ☒ false
2. Facts without understanding are often difficult to transfer to a new situation. ☐ true ☒ false
3. Concepts help connect individual facts. ☐ true ☒ false

🕒 Exercise 4

Decide whether it is a fact (F), a concept (C), or a principle (P).

- Water boils at 100 °C. **F C P**
- Temperature change **F C P**
- Plants need light for photosynthesis. **F C P**
- Movement of bodies **F C P**
- Bratislava is the capital of Slovakia. **F C P**
- System of chemical elements **F C P**
- Bodies move under the influence of a force **F C P**
- $5 \times 6 = 30$ **F C P**
- Relationship between a leg and a hypotenuse **F C P**
- Animals breathe oxygen. **F C P**
- As temperature increases, substances change their state of matter. **F C P**
- Balance in nature **F C P**

3. Formulating goals

In concept-based teaching, it is important to formulate goals in such a way that they lead to understanding. Instead of the goal:

"The student can list the names of rivers," it is better to formulate the goal as follows:

"The student can list rivers to understand that water influences the life of a country".

Such a formulation leads the student from isolated knowledge to understanding the significance of the learning material.

🕒 Exercise 5

Which goal meets the principles of concept-based teaching?

- a) The student can list the planets.
- b) The student can list the planets to understand that the planets move in a system according to specific laws.
- c) The student can name and order the planets according to their orbits.

4. Knowledge transfer

An important element of concept-based teaching is transfer, which is the ability to use knowledge in a new situation. A student who understands concepts:

- connects knowledge,
- solves new problems,
- is able to learn more independently,
- transfers knowledge to other situations.

This is precisely why concept-based teaching is closely linked to the competence of learning to learn. When a student understands principles, they are also able to orient themselves in new tasks they have not encountered before.

🔄 Exercise 6

Complete the text.

Learning transfer means using knowledge in a situation.

🔄 Exercise 7

What fosters concept-based learning?

- memorization without understanding
- independence in learning
- the ability to connect knowledge

- transferring knowledge

5. Example: Shapes and colors

When learning about geometric shapes and colors, students do not need to merely memorize that a circle is round and a square has four sides. It is more important for them to understand the properties of shapes and colors and the relationships between them.

This approach is based on the principle of:

- superordinate concepts,
- subordinate concepts.

Superordinate and subordinate concepts

A superordinate concept is a broader category, for example:

- shapes,
- colors.

A subordinate concept is a concrete example, for example:

- circle, square, triangle, rectangle,
- red, blue, yellow, green.

When students understand this principle, they will be able to place new information in a broader context.

🟡 Exercise: Classifying shapes and colors

- **Exercise objective:** The student understands that shapes and colors can be grouped according to common features and that this knowledge can be used in new situations.
- **Aids:** colored cards with various shapes.
- **Procedure:**
 1. The teacher shows a card, for example, a blue circle, and asks: "What shape is this?" Students answer: circle.

2. Next, the teacher asks: "To what broader category does the circle belong?" Answer: shapes.
3. The teacher continues in the same way with colors: "This card is blue. To what group does the color blue belong?" Answer: colors.
4. Next, students group the cards according to shapes and colors. Gradually, they notice that individual elements belong to broader categories.

In this way, they learn not only to name a specific element but also to understand the system of connections between concepts.

Reflection, generalization, and knowledge transfer

To ensure the exercise does not lead only to giving the correct answer, it is important to supplement it with reflection and knowledge transfer.

- **Reflection:** The teacher may ask:
 - What did you learn today about shapes and colors?
 - How do you know that you learned something, rather than just memorized it?
- **Generalization:** Students realize that the principle of grouping by features also applies to new examples. For instance: "Even a circle we haven't seen yet still belongs to the category of shapes".
- **Knowledge transfer:** Students consider where they can use this knowledge in other situations, for example:
 - while drawing,
 - when building with blocks,
 - while observing patterns in nature,
 - while sorting items according to features.

Such an activity fosters:

- deeper understanding of concepts,
- knowledge transfer,

- development of metacognition.

The student learns not only *what* something is, but also *why* and *how* it works.

Graphic scheme and visualization

In concept-based teaching, visualization of the relationships between concepts is very helpful. For example:

- **Superordinate concepts:** Shapes, Colors.
- **Subordinate concepts:** circle, square, triangle, rectangle, red, blue, yellow, green.

Such a scheme helps students better realize categorization and the relationships between concepts. Visualization supports understanding, not just memorization.

Exercise 8 Which question refers to which step?

Reflection	Which rule does it stick to?
Generalization	Where else may I use it?
Thinking	What have I learnt?

Exercise 5.1 – From topic to concept-based teaching

Select a topic from the subject you teach and develop it according to the principles of concept-based learning. Draw inspiration from examples of shapes and colors.

Topic

Enter a specific lesson topic: e.g., Seasons / Multiplication / Plants / Parts of speech

Goal focused on understanding

Formulate the goal so that it aims for understanding:

Use the phrasing:

"The student ..., in order to understand that ..."

Facts – Concepts – Principle

Complete the three levels of teaching:

Facts (what specifically the student is learning):

Concepts (broader concepts):

Principle (general rule / idea):

Transfer (knowledge transfer)

Answer: In what new situation can the student use this knowledge?

Reflection questions

Propose questions for students:

Generalization

What should the student be aware of as a general rule? Start, for example, with:

"We discovered that..."

"The rule is that..."

Transfer (application in life)

Where else can the student use this?

Topic	
Goal	
Facts – concepts – principles	
Transfer	
Reflection	
Generalization	
Connecting	

◆_◆Notes

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5. Concept-based learning and the "learning to learn" competence

Concept-based learning directly supports the competence of learning to learn because it leads the student to:

- seek connections,
- connect knowledge,
- understand principles,

- be able to use acquired knowledge in a new situation.

A student who understands concepts is not limited to just one specific example or learned procedure. They are more flexible, independent, and better prepared for further learning.

Concept-based learning therefore develops:

- deeper understanding,
- the ability to transfer knowledge,
- self-reflection,
- independence in learning.

Short summary

Exercise 9

Complete the text.

..... learning shifts the focus from
memorizing to understanding
..... and context. It helps the student
..... knowledge, use it in new
situations, and develop independence in learning. This is
precisely why it is an important element of the development of
..... learning to learn.

■ Check for understanding – Module 5

Exercise 10

1. Concept-based learning means:
 - a) more facts
 - b) deeper understanding
 - c) more tests
2. Knowledge transfer means:
 - a) forgetting knowledge
 - b) using knowledge in a new situation
 - c) revision
3. Which example from mathematics illustrates concept-based learning?
 - a) memorizing the formula for the circumference of a circle
 - b) understanding why the formula for the circumference of a circle works
 - c) repeating calculations from a notebook without understanding

Module 6: Working with text and student thinking

Goal

 After completing this module, the teacher:

- understands the broader meaning of the concepts of literacy and reading skills,
- perceives text as a tool for thinking, not just as a source of information,
- knows the three stages of effective work with text,
- is able to use thinking frameworks when working with text,
- knows the Cinquain method as a tool for reflection, synthesis, and understanding.

1. Introduction to literacy

Literacy is not just the ability to read and write. It also encompasses the understanding, interpretation, and use of information in various situations. Modern pedagogy views it as the ability to:

- recognize the meaning of a text – understand what is essential and what is secondary,
- use information – apply knowledge in new situations,
- reflect and evaluate – assess the credibility and relevance of a text.

Reading skills

Reading skills are a specific area of competence that includes:

- text decoding – the ability to read and understand words and sentences,
- content comprehension – grasping the meaning of words, sentences, and the entire text,
- critical thinking – evaluating information, searching for connections and evidence,

- metacognitive thinking – awareness of one's own comprehension, asking questions, and checking for understanding.

In pedagogical practice, working with text is based precisely on these skills. A student who possesses reading skills is not a passive recipient of information. They actively analyze the text, connect its elements, interpret it, and use it as a learning tool.

These skills are best developed through active work with text. The student does not just learn to read and memorize information, but learns to connect, analyze, and interpret it. This fosters deep understanding and the ability for independent learning.

Exercise 1

Decide whether the statement is true or false: ■ True + False

1. Literacy only means the ability to read a text. ■ +
2. Interpretation and use of information are also part of literacy. ■ +
3. Evaluating information is not important when working with text. ■ +

Exercise 2

Match the concepts to the descriptions of reading comprehension elements.

Understanding the content	Monitoring one's own understanding
Metacognitive thinking	Understanding the meaning
Decoding the text	Evaluating information and evidence
Critical thinking	Reading words and sentences

2. Three stages of working with text

Effective work with text proceeds in three basic phases:

Before reading

The student asks themselves questions:

- What do I already know about this topic?
- What do I expect?
- What should I focus on?

This stage activates existing knowledge and prepares the student for reading.

During reading

The student checks on an ongoing basis:

- Do I understand what I am reading?
- What is important?

- What is unclear to me?
- What questions come to mind while reading?

This phase helps check for comprehension.

After reading

The student reflects on:

- What have I learned?
- How does this relate to what I already know?
- What was most important?
- Where can I use this knowledge?

This phase supports summarizing, connecting, and transferring knowledge.

These three steps help students take control of their understanding and prepare them to apply knowledge in new situations.

Exercise 3

List the 3 stages of working with text:

- 1.
- 2.
- 3.

Exercise 4

Which questions belong to the pre-reading stage?

- What do I already know about this topic?
- What should I focus on?
- What was most important?
- What do I expect from the text?

Exercise 5

Decide whether the statement is true or false: ■ True + False

1. During reading, the student is only supposed to finish reading the text. ■ +
2. During reading, one should pay attention to what is relevant and what I do not understand. ■ +

Exercise 6

Which questions belong to the post-reading stage?

- What have I learned?
- What do I expect from the text?
- What was most important?
- Where can I use this knowledge?
- What should I focus on?

3. Thinking routines when working with text

Text can also be processed using thinking routines that make the thinking process visible and support analytical and creative information processing. Appropriate routines include:

See – Think – Wonder

Helps students:

- observe,
- formulate initial interpretations,
- ask questions.

Claim – Support – Question

Helps students:

- formulate claims,
- search for evidence in the text,
- create questions that lead to deeper understanding.

Think – Puzzle – Explore

Helps students:

- name what they are thinking,
- become aware of what they do not yet understand,
- propose a way to further explore the topic.

These procedures support active work with text, the formulation of one's own thoughts, and reflection.

🔄 Exercise 7

Assign its benefits for reading to the name of the exercise.

See, think, consider	Observation, interpretation, questions
Claim, justification, question	What do I think, What I don't understand, how will I analyse this?
Think, puzzle, explore	Claim, evidence, another question

🔄 Exercise 8

Match the routine question to its function

What can you see?	Question, seeking for the answer
	Observation
	Interpretation

What do you think about it?
What do you find interesting about it?

🔄 Exercise 9

1. Which option best describes the Claim–Support–Question routine?:

a) headline – paragraph – summary

b) reading – copying – test

c) claim – evidence – question

Exercise 10

Complete the text.

The Think–Puzzle–Explore routine supports other
..... topics.

4. Practical exercise: Cinquain

A *cinquain* (five-line poem) is a quick and effective technique used for synthesizing knowledge, reviewing material, and reflecting on understanding.

The student creates a five-line, unrhymed poem following a strictly defined structure:

1st line – topic: 1 noun

2nd line – description: 2 adjectives

3rd line – action: 3 verbs

4th line – attitude or feeling: a four-word sentence

5th line – summary: 1 noun (a synonym or metaphor)

Example: Winter

Winter

White, frosty

It snows, freezes, it is slippery

Children like to go sledding

Season

Example for grade 1: Cat

Cat

Agile, playful

Hunts, jumps, plays

It is quiet and agile

Predator

Application and advantages of the Cinquain method

The Cinquain method is suitable for:

- reviewing material,
- checking understanding,
- creative reflection,
- expanding vocabulary,
- synthesizing knowledge.

It supports:

- critical thinking,
- creativity,
- working with parts of speech,
- expressing one's own position,
- summarizing the essence of a topic.

It can be carried out:

- individually,
- in pairs,
- in groups.

For the teacher, it is also valuable because it shows how the student understands the material, not just what they have memorized.

Exercise 11

Match the function of the lines to the Cinquain technique.

VERSE 1	Verbs (activity)
VERSE 2	Noun (summary)
VERSE 3	Noun (topic)
VERSE 4	Four word sentence (statement or feeling)
VERSE 5	Adjectives (description)

Exercise 12

Assign the line functions to the parts of the created five-line poem (cinquain) about a cat.

1. Cat	A: activity
2. Agile, playful	B: topic
3. Hunting, jumping, playing	C: description
4. Is quiet and agile	D: summary
5. Predator	E: attitude/sentence

Exercise 13

What does the Cinquain method support?

- critical thinking
- creativity
- only mechanical describing
- synthesis of knowledge

6. Reflection, generalization, and making connections

For work with text to lead to deeper learning, it is worth complementing it with three steps:

Reflection

The student realizes:

- What did I learn today?
- Which part of the text was most interesting to me?
- What did I understand best?

Generalization

The student realizes that the same technique can be applied to different topics and texts. For example, the Cinquain method can be used:

- in stories,
- in didactic texts,
- in nature topics,
- when reviewing concepts.

Transfer

The student considers where they can use the same way of working in other subjects or situations. This structure supports the transfer of knowledge and more independent application of strategies.

Exercise 14

Provide the steps leading to deeper learning while working with text in the correct order.

1:

2:

3:

7 . Questions that develop understanding

While working with text, it is important not to focus solely on facts, but also on meaning, causes, and reasoning.

Instead of the question: *What happened?* we can ask:

- Why did it happen?
- How do we know that?
- What does it mean?

Example

- **Factual question:** How many hours does a cat sleep?
- **Comprehension question:** Why does a cat sleep for many hours?
- **Metacognitive question:** How do I know what is important in the text?

Such questions lead the student from simple information retrieval to deeper understanding and reflection on their own reading process.

🔄 Exercise 15

Read the text and the questions for it. Circle the type of question it is.

(F – fact, Q – comprehension question, MQ – metacognitive question)

The Little Prince met a fox. The fox explained to him that he must "tame" her in order for them to become friends. The Little Prince learned that important things are invisible to the eye.

1: Who met the fox? F Q MQ

2: How would you explain the meaning of friendship in this text? F Q MQ

3: How did you arrive at your answer? F Q
MQ

4: What does the word "tame" mean? F Q
MQ

5: How did you memorize the main thoughts of the text?

F Q MQ

6: Where does the meeting take place?

F Q

MQ

7: Why did the Little Prince want to tame the fox?

F Q MQ

8: What did the Little Prince learn?

F Q

MQ

9: Why are some things invisible to the eye?

F Q MQ

C* Exercise 6.1 – Questions regarding text comprehension

Select any short text from your field of expertise and prepare questions for it (3 factual questions, 4 comprehension questions, and 2 metacognitive questions):

Factual questions	1.
	2.
	3.
Comprehension checking questions	4.
	5.
	6.
	7.
Metacognitive questions	8.
	9.

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8. Working with text and the "learning to learn" competence

Working with text directly supports the "learning to learn" competence because the student learns to:

- select relevant information,
- check their understanding,
- ask questions,
- connect new knowledge with what they already know,
- use strategies for independent learning.

A student with reading skills becomes an active participant in their own learning process. For them, a text is not just a chore, but a means to understand the world and themselves.

Exercise 16

What does working with text support? (multiple answers possible)

- monitoring understanding
- asking questions
- connecting knowledge
- passive assimilation of information

Mini-summary

Exercise 17

Complete the text.

..... Literacy encompasses not only reading but also comprehension, interpretation, critical thinking, and is a tool for thinking that can develop independence, reflection, and learning. Active work with therefore significantly supports the competence of learning to learn.

■ Understanding Check – Module 6

Exercise 18

1. The text is:
 - a) a tool for thinking
 - b) only information
 - c) a chore
2. A metacognitive question is:
 - a) Who?
 - b) When?
 - c) Why do you think so?

Module 7: How to plan a lesson developing the "learning to learn" competence

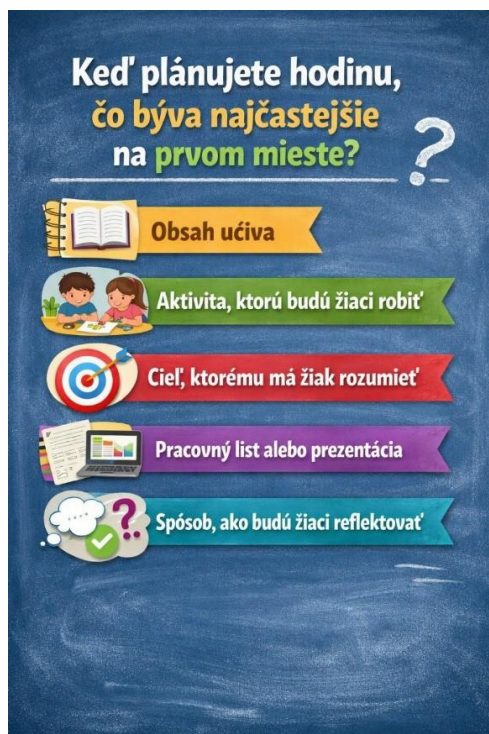
Goal

Upon completing this module, the teacher will:

- understand the difference between a standard lesson and a lesson focused on the "learning to learn" competence,
- know the four pillars of a lesson that develops learning skills,
- be able to plan a lesson incorporating a meaningful goal, stimulating thinking, metacognition, and reflection,
- understand the teacher's role in supporting students' independent learning.

1. How does a lesson focused on developing the "learning to learn" competence differ from others...?

Think about it



When planning a lesson, what do you usually put first?

- teaching content
- the task students will perform
- the goal the student is to understand
- a worksheet or presentation
- the way students will analyze

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When planning a lesson that develops the "learning to learn" competence, it is important to understand the learning process itself.

A standard lesson often focuses primarily on what students are supposed to learn. Frontal instruction dominates; the teacher delivers content, and the student receives it. The responsibility for mastering the material rests primarily with the teacher.

A lesson focused on the "learning to learn" competence focuses primarily on how students are to learn it. It is not about different material, but about a different way of working with it. Responsibility gradually shifts to the student, who becomes an active participant in their own learning process.

Comparison of approaches

Area	Commonly used approach	Approach focused on "learning to learn" competence
Goal	"Open your books to page 20."	"Today, we will learn how to recognize misinformation."
Introduction	Teacher's lecture, dictation	Group discussion, solving a puzzle
Metacognition	The teacher says who was attentive	The student reflects on which strategy helped them
Reflection	"For homework, you have exercise no. 5."	"What was the most difficult part of today's task and why?"

The difference, therefore, lies not only in the form of the class, but above all in whether the student reflects on their learning during the lesson, makes decisions, and analyzes their progress.

Exercise 1

Underline the examples that demonstrate an active approach to developing the "learning to learn" competence:

1. Open your textbooks to page 20.
2. **What was the most difficult part of today's task and why?**
3. The teacher will say who was attentive.
4. For homework, you have exercise no. 5.
5. **Today, we will learn how to recognize misinformation.**
6. **Which strategy worked for you today?**

Exercise 2

Decide whether the statement is  true + false

1. A lesson dedicated to developing the "learning to learn" competence relies on different material than a standard lesson. —  +
2. The difference lies primarily in how the student works with the material.  +
3. During a lesson developing the "learning to learn" competence, the teacher is solely responsible for its course.  +

Exercise 3

Which situations correspond more to the traditional approach?

- the teacher speaks for a long time without a break
- students solve an open-ended task
- tasks require only mechanical copying
- students wait for the correct answer from the teacher
- students analyze their own mistake

*C Exercise 7.1 – My today's practice

Reflect on your lessons.

As part of your self-reflection, consider your typical lessons.

Where does students' thinking appear during the lesson?

- At what point in the lesson did students first have to really "turn on their brains"?
- When did students ask "why" instead of "what do I have to do"?

- During which task did they argue among themselves about the solution?
- How much time did they have for silent thought before giving an answer?
- Which question forced them to look for new connections?
- Did they only have to repeat information, or also use it in a new context?
- What did you learn today about their thought process?
- Which part of the lesson was the greatest intellectual challenge for them?
- Did students have the opportunity to analyze their own mistakes?
- When did you ask another question instead of giving a ready-made answer?

Where is the learning rather passive?

- When did you speak for longer than 10 minutes without a break during the lesson?
- Which tasks required only mechanical copying?
- How many students did not speak up or write anything during the lesson?
- In the case of which exercises was a one-word answer sufficient?
- At what moments did students expect the correct result from the teacher?
- When did they only watch a presentation or a film without an additional task?
- Which part of the lesson was based solely on assimilating facts without processing them?
- When did you solve a problem instead of the students to save time?
- In the case of which tasks did students not have to make their own decisions?
- How many students seemed "invisible" during the lesson?

__?_Notes

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2. Four pillars of a lesson developing the "learning to learn" competence

Every lesson that develops learning skills should be based on four pillars:

1. Meaning and Purpose – "Why am I here today?"

Without a clear goal, learning turns into a sequence of isolated tasks for the student. However, if they understand why they are learning something, their internal motivation grows.

Key elements:

- **transparency** – the goal is not just in the teacher's lesson plan, but is visible in the classroom,
- **student-oriented language** – we formulate the goal so that the student understands it,
- **connection to life** – we show the practical significance of the teaching material.

Examples:

- Instead of: "Today we will discuss photosynthesis."

- More appropriate: "Today I will be able to explain how plants produce the oxygen I breathe."

Or:

- "Today I will be able to calculate whether it pays off for me to use a store discount."

2. Activating thinking – "The student as an active creator"

The brain learns when it has to work. It is not enough for the student to just listen or repeat information. They must be engaged in solving problems, making decisions, and searching for meaning. The goal is to place them in a situation where they must think, compare, and investigate.

Helpful examples include:

- open-ended questions like "What would happen if...?",
- thinking routines like "See – Think – Wonder",
- problem-based learning, where students first look for a solution and only then receive guidance.

3. Metacognition – "Learning about my learning"

Metacognition means that the student observes and directs their own learning. They reflect on:

- what strategy to choose,
- what helps them,
- where they got stuck,
- what they need to change.

This area includes:

- planning and monitoring,
- identifying barriers,
- self-assessment.

Useful tools:

- scales (e.g., on a scale of 1 to 10, how confident am I),
- understanding signals,
- feedback cards,
- short reflective questions during work.

4. Reflection – "What do I take away from this?"

Reflection closes the learning cycle. It helps the student realize what they have learned, what was difficult, and where they can apply the new knowledge. It is not just about repeating material, but about processing it. Reflection can involve:

- summarizing the essence,
- determining progress,
- transferring knowledge to other subjects or life situations.

An example is the 3–2–1 method:

- 3 new things I learned,
- 2 interesting facts,
- 1 question I still have.

Exercise 4

Mark whether the goal relates to **content** or **competence**.

No.	Goal	Content	Competence
1.	We will discuss the water cycle.	☐	☐
2.	Today, I will be able to find a place on the map where I would like to go on a trip.	☐	☐
3.	We are practicing fractions.	☐	☐
4.	Today, I will be able to correctly write words that I often use in messages and stories.	☐	☐
5.	Today, I will be able to share a cake fairly among friends.	☐	☐
6.	Today, I will be able to explain why breathing is important and how my lungs work.	☐	☐
7.	We will learn selected vocabulary.	☐	☐
8.	We will learn about the respiratory system.	☐	☐

No.	Goal	Content	Competence
9.	Today, I will be able to explain why it rains and where the water goes after the rain.	☐	☐
10.	We will learn about the map.	☐	☐

Ç Exercise 5

1. Which task most stimulates thinking?

a) Copy the definition into your notebook.

b) Underline the correct answer.

c) **What would happen if one condition of the task were changed?**

Ç Exercise 6

Which tools support metacognition?

- **understanding signal**
- **scaling**
- **short reflective questions**
- only an assessment at the end of the lesson

Ç Exercise 7

Complete the text.

Reflection helps the student realize what they have **learned**.

Ç Exercise 8

The traffic light method uses 3 colors. Explain their meaning.

- **Red:** I don't understand / I need help.

- **Yellow:** I understand partially / I have some doubts.
- **Green:** I understand / I am ready to move on.

Exercise 9

1. What is the purpose of feedback and peer-correction?

- a) to find as many errors as possible
- b) to learn based on feedback regarding the process and achievements
- c) to speed up the correction proces

3. What a lesson developing the "learning to learn" competence should contain

When planning a lesson dedicated to developing the "learning to learn" competence, a teacher can use a simple template.

Example

Topic: My Day, My Choice

Grade and subject: English, 6th grade, level A1/A2

Goal: The student is able to describe their day and compare it with the routines of others.

Procedure or method used: See – Think – Wonder

Tasks for students:

1. activation (logic chain),
2. problem solving (Detective S),
3. challenge of the day (ideal routine).

Metacognitive element: Traffic Lights

4. During the creation of sentences in the third person, students place a crayon on their desk in a color corresponding to their level of understanding:
- **Green** – I understand, I know how to add "-s".
 - **Yellow** – I am not sure in the case of irregular verbs (do/does, have/has).
 - **Red** – I am lost, I need help from a peer or the teacher.

Peer correction: Students swap notebooks and mark each other's correctly used verb forms. They look not only for errors but also for successes.

Summary and reflection: Exit Ticket – a short summary card on which the student writes down what they learned, what helped them, and what they still need to practice.

Exercise 7.2 – Draft your own lesson

Fill out the template for one specific topic:

Topic:

Grade and subject:

Goal ("so that the student understands that..."):

Procedure or method used:

Tasks for students:

Metacognitive questions:

Summary and reflection:

  **Notes**

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4. What does the teacher do?

In a lesson that develops the "learning to learn" competence, the teacher's role changes. The teacher is no longer just a transmitter of content, but a guide who creates the conditions for the student's independent learning.

The teacher:

- **models the thinking process out loud** – shows how to plan activities, monitor progress, and evaluate strategies,
- **proposes tasks that give students the freedom of choice** – supports student independence and initiative,
- **asks reflection-prompting questions** – e.g., "Why did you choose this method?" or "What would you do differently next time?",
- **provides feedback on the process**, not just the result,
- **prepares appropriate challenges** – tasks should be sufficiently demanding but not discouraging,
- **creates scaffolding** – i.e., support that helps the student gradually take responsibility for their own learning.

This role of the teacher supports not only results in a specific lesson but also the long-term development of independence and learning skills.

Exercise 10

Match the description to the teacher's activity.

1. Thinking modelling	A: student can choose the method or procedure of solution
2. Freedom of choice	B: teacher provides supports and which is gradually shortened
3. Feedback on the process	C: teacher shows, plans and assesses the progress
4. Scaffolding	D: attention focused on strategy, not only on the outcome

Exercise 11

What does the teacher support through a lesson focused on the "learning to learn" competence?

- student independence
- reflection on one's actions
- responsibility for learning
- passive waiting for an answer

Mini-summary

Exercise 12

Complete the text.

A lesson developing the "learning to learn" competence does not focus solely on _____, but also on the

_____ of learning. It is based on four pillars: clear meaning and purpose, _____ thinking, _____, and reflection. The teacher's task is to guide the student toward independence, to reflect on their own _____, and to take responsibility for the learning process.

◆ ■ Understanding Check – Module 7

🔗 Exercise 13

1. Classes dedicated to "learning to learn" focus primarily on:
 - a) teaching content
 - b) **the learning process**
 - c) tests
2. Metacognition means:
 - a) memory
 - b) **reflection on learning**
 - c) silence

Module 8: Final Project – My lesson developing the "learning to learn" competence

Goal

Upon completing this module, the participant:

- understands the importance of the final project as a practical verification of the course,
- can develop a lesson plan focused on the development of the "learning to learn" competence,
- knows the project assessment criteria,
- analyzes their own professional development and plans next steps in their pedagogical practice.

1. Why is the final project important?

The "learning to learn" competence is not manifested solely in theoretical knowledge. It is manifested primarily in whether the teacher can design a lesson during which the student:

- thinks,
- reflects,
- learns about their own learning,
- takes on greater responsibility for the learning process.

Therefore, the best proof of mastering this competence is a concrete lesson.

Project as proof of pedagogical work

The final project functions as a pedagogical portfolio in practice. It is important because:

- it connects theory with practice,
- it reveals the depth of reflection,
- it enables the observation of the impact on the student.

A test will check primarily memory.

A project will check the ability to create an environment in which students learn to think and develop.

Exercise 1

Decide whether the statement is ☐  true + false

1. The "learning to learn" competence can be fully verified only by means of a test. ☐  +
2. The final project connects theory with practice. ☐  +
3. The project also shows how the teacher reacts to the students' learning process. ☐  +

2. Final project task

Your task is to develop a lesson plan that:

- is intended for primary school students,
- develops the "learning to learn" competence,
- uses at least one thinking routine,
- includes metacognitive questions,
- has a conceptual goal formulated in the style: "so that the student understands that..."

The goal is not to prepare a "nice exercise," but a meaningful lesson.

📌 Exercise 2

What should the final project include?

- **a thinking routine**
- **metacognitive questions**
- **a conceptual goal**
- as many activities as possible without a clear goal

3. Goal of the project

The final project should not be a collection of exercises. It is intended to show that during the lesson, the student:

- thinks,
- understands the goal,
- learns about their own learning,
- analyzes their progress,
- takes on greater responsibility for their own progress.

📌 Exercise 3

1. Which task best reflects the goal of the project?

- a) to prepare many fun tasks
- b) to create a lesson during which the student actively thinks and reflects on learning
- c) to write the longest possible lesson plan

4. Project structure

When developing a project, the following structure should be used:

- Lesson topic
- Grade/Class
- Subject
- Conceptual goal
- Student tasks
- Thinking procedure used
- Metacognitive questions
- Summary and reflection

This structure helps maintain project clarity and focus on the essence of teaching.

*C Exercise 8.1 – First project draft

Fill in the preliminary project:

Lesson topic:

Grade/Class:

Subject:

Conceptual goal:

Student tasks:

Thinking routine:

Metacognitive questions:

Summary and reflection:

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5. Project assessment criteria

The project will be assessed according to five basic criteria:

- supporting student autonomy,
- development of metacognition,
- development of thinking,
- a clear conceptual goal,
- realism and usefulness.

These criteria help to distinguish a "nice exercise" from a lesson that actually develops the competence of learning to learn.

Criterion 1 – Supporting student autonomy

It is assessed to what extent the project transfers responsibility for learning from the teacher to the student.

It is important whether students:

- have the opportunity to choose,
- can decide on their progress,
- work at their own pace,
- bear appropriate responsibility for the result.

Criterion 2 – Development of metacognition

The project is intended to encourage students to reflect on their own learning. It is assessed whether the project enables:

- identifying strategies that proved helpful,

- recognizing obstacles,
- ongoing self-assessment,
- adjusting their progress if necessary.

Criterion 3 – Development of thinking

The project should go beyond the framework of mere reproduction of facts. The emphasis is placed on:

- critical thinking,
- analysis,
- searching for connections,
- creating one's own solutions,
- deeper understanding.

The student is not only expected to provide the correct answer but also to think, justify, and connect facts.

Criterion 4 – A clear conceptual goal

The project should be based on a clear and understandable goal. It is assessed whether:

- the goal is formulated in an understandable way,
- it aims at understanding the main idea,
- all activities support its implementation,
- the student knows why they are performing a given task.

Criterion 5 – Realism and usefulness

A good project should not only be theoretically correct but also feasible. It is assessed whether:

- tasks are adapted to the age of the students,
- they can be mastered in real time,
- they are related to life,
- they lead to knowledge and skills useful also outside of school.

Exercise 4

Assign the content to the criteria.

1. Autonomy	A: student reflects on his learning process
2. Metacognition	B: student has freedom of choice and bears responsibility
3. Thinking development	C: lesson is possible to be conducted
4. Conceptual goal	D: exercise requires going beyond reproducing facts
5. Realness	E: student understands the importance of the material

Ç Exercise 5

Ç What supports student autonomy?

- the opportunity to choose the course of action
- working at one's own pace
- the teacher deciding on every step
- responsibility for the result

Ç Exercise 6

Match the element to the metacognitive question.

1. What helped me today?	A: the change of attitude
2. Where am I stuck?	B: naming the strategy
3. What will I change next time?	C: identifying the obstacle
4. How well am I doing?	D: Current self-assessment

Ç Exercise 7

1. Which task better develops thinking?

- a) Copy the definition.
- b) Choose the correct option.
- c) Explain why you chose this solution and what would change under a different condition.

2. Which goal is best formulated?

- a) We will discuss the water cycle in nature.
- b) The student can name 3 parts of the image.
- c) The student can describe the water cycle in order to understand that water in nature constantly changes form and moves in a cycle.

Exercise 8

Decide whether the statement is true or false: ☐  true ☒ false

- 1 A well-prepared project does not need to consider the age of the students. ☐  ☒
- 2 Realism also means that the lesson is feasible in ordinary school practice. ☐  ☒

Exercise 8.2 – Self-assessment

Check your project. Answer the questions briefly:

- Do students have the freedom of choice during the lesson?
- Will they reflect on their own learning?
- Is the goal clear and conceptual?
- Do the tasks support thinking rather than just repetition?
- Is the lesson realistic and feasible

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6. Reflection on your own professional development

Part of the final project is also a reflection on your own professional development. It is not just about what you have created, but also about:

- what you have learned about the learning process,
- how your pedagogical approach has changed,
- what you intend to do differently in your classroom.

The final project is not just a test of what you have learned. It is an opportunity to show how your approach to teaching has changed. It is not about creating an "ideal" lesson, but one during which:

- the student thinks,
- the student understands the goal,
- the student learns about their own learning,
- the student has space for reflection,
- the student takes greater responsibility for their progress.

This is precisely where the true development of the competence of learning to learn manifests itself.

*C Task 8.3 – Self-reflection

Part of the final project is also a reflection on your own professional development. This is precisely where the actual

development of the competence of learning to learn manifests itself.

To what extent has your view on how student?	1 – did not change at all 2 3 4 5 – changed fundamentally
Please formulate 3 key conclusions you have drawn from the course	1. 2. 3.
What areas do you want to consciously change?	Lesson planning Changing the teacher's role Feedback Student engagement t

To what extent has your view on how students learn effectively changed?	1 – did not change at all 2 3 4 5 – changed fundamentally
	differentiation
What was the most important discovery during the course?	
What surprised you?	
What would you like to start with?	

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► Short summary

Exercise 9

Complete the text.

The final project represents the practical culmination of the entire course. It demonstrates how a teacher can

connect theory with, plan meaningful
....., and create conditions in which
students learn to,
....., and

Check for understanding – Module 8

Exercise 10

1. The final project is important primarily because:
 - a) it replaces a test
 - b) it shows how a teacher translates theory into practice
 - c) it serves only as a formal conclusion to the course
2. A good project should contain:
 - a) only a worksheet
 - b) a conceptual goal, metacognitive questions, and reflection
 - c) as many activities as possible, regardless of the goal

Summary

What you will learn from the course

Developing the competence of "learning to learn" is not a one-time activity or a separate teaching method. It is a way of thinking about learning and teaching.

This course has shown you how to:

- gradually transfer responsibility for learning to students
- support their independence and intrinsic motivation
- develop metacognition and the ability to reflect on their own learning
- lead students to deep understanding instead of rote memorization
- build the classroom as a safe environment for thinking, asking questions, and making mistakes

The teacher as a guide in the learning process

The teacher's task is no longer just to explain the material. It is more important to create conditions in which students learn to:

- think
- ask questions
- plan their own learning
- evaluate their own progress
- learn from mistakes

When a teacher consciously works on the learning process, they help students become active and independent teachers of themselves.

Message of the course

A student who learns how to learn:

- copes well in new situations
- is able to solve problems
- manages even without constant supervision
- builds a positive attitude toward lifelong learning

The ability to learn is the foundation for success in school and in life. And a teacher who consciously develops it shapes more than just knowledge — they shape the capacity for growth.

Bibliography:



Appendix 1: Answer Key

Module 1

Exercise 1

- School prepares us for everything we will need (False)
- You must learn throughout your whole life (True)
- Memorization is the most important (False)
- The ability to learn new things is key (True)

Exercise 2

1E, 2C, 3A, 4B, 5F, 6D

Exercise 3

- **Reproduction** → memorize a definition, learn by heart
- **Transformation** → look for connections, use knowledge in practice, understand the relationship

Exercise 4

- **Planning** – I set a learning goal for myself

- **Management process** – I check if I understand the material
- **Self-assessment** – I evaluate what I succeeded in

Exercise 5

- **Learning:** I memorize material; The teacher checks me; I wait for instructions; I perform a task; I receive a grade
- **Learning to learn:** I know what I have learned; I am able to plan; I know how to learn; I am able to evaluate my progress; I understand the purpose of a task

Exercise 6

- They are more persistent (True)
- They cope better in new situations (True)
- They need constant instructions (False)
- They have greater motivation (True)

Exercise 7

Student competence in the scope of "learning to learn" is the ability to manage one's own learning process. It constitutes the foundation for independence, adaptability, and lifelong learning. It helps to react to changing conditions.

Exercise 8

1b, 2b

Module 2

Exercise 1

- Students are deprived of motivation mainly because they are lazy (False)

- Motivation influences the desire to learn (True)
- Learning is a simple activity that requires no effort (False)

Exercise 2

Motivation is the force that stimulates us to act.

Exercise 3

- **Extrinsic motivation:** I want to get a good grade – I will avoid punishment
- **Intrinsic motivation:** I want to understand this – I learn independently – I am curious

Exercise 4

1B, 2C, 3A

Exercise 5

Motivation is the foundation of learning. If needs related to competence, autonomy, and relationships are met, students take responsibility for their learning and learn on their own initiative.

Exercise 6

1b, 2b

Module 3

Exercise 1

Metacognition means reflection on one's own thinking and managing one's own learning process.

Exercise 2

- **Result:** I wrote a test – I performed a task – I filled in the answer
- **Metacognitive learning:** I understand this – I know what strategy I used – I know what did not work for me

Exercise 3

When a student plans, monitors, and adjusts their goals, it is **metacognitive regulation**.

When a student knows how they learn, what works for them, and where they have weaknesses, it is **metacognitive knowledge**.

Exercise 4

When a student plans, monitors, and adjusts their goals, it is **metacognitive regulation**.

When a student knows how they learn, what helps them, and where they have weaknesses, it is **metacognitive knowledge**.

Exercise 5

Before learning: planning; During learning: monitoring;
After learning: evaluation

Exercise 6

- What do I already know about this? (True)
- How will I proceed? (True)
- What would I do differently next time? (False)
- What should I focus on? (True)

Exercise 7

- The question "Who has the result?" promotes observation of the learning process (False)
- The question "Do you understand what you are doing right now?" supports metacognition (True)

Exercise 8

- **Planning:** How will I proceed? What will be difficult? What do I already know about this?
- **Observation:** Do you understand what you are doing? Which step is the most difficult? Does your strategy work?
- **Evaluation:** What would you do differently? What did you learn? What helped you?

Exercise 9

- **Substantive questions:** When did this happen? How much is this? What is the result?
- **Metacognitive questions:** How will you check if you understand this? Why did you choose this procedure? How did you come up with that?

Exercise 10

- An error is proof of incompetence (False)
- An error can be a source of learning (True)
- In the event of an error, it is enough to provide the correct answer and continue (False)

Exercise 11

Looking for a better solution, Possibility of improvement, Indicating the place where the error occurred

Exercise 12

1D, 2C, 3B, 4A

Exercise 13

Metacognition means that the student thinks about how they learn, observes their progress, and is able to change it. This allows them to plan their learning, check for understanding, learn from mistakes, and gradually become an independent learner.

Exercise 14

1b, 2b, 3c

Module 4

Exercise 1

The "Visible Thinking" method aims to make the students' thinking process visible.

Exercise 2

- In the case of visible thinking, the most important thing is only whether the answer is correct (False)
- Questions can stimulate deeper thinking (True)
- A one-time exercise is enough to develop thinking (False)
- A safe environment fosters thinking aloud (True)

Exercise 3

Respect for students' answers, space for uncertainty, possibility of changing one's mind

Exercise 4

1C, 2E, 3A, 4D, 5B

Exercise 5

1: Choose one routine, 2: Model thinking, 3: Visualize thinking, 4: Reflect on the process

Exercise 6

1C, 2D, 3A, 4E, 5G, 6B, 7H, 8F

Exercise 7

1D, 2E, 3G, 4H, 5A, 6F, 7B, 8C

Exercise 8

Metacognition, self-reflection, independence in learning

Exercise 9

- 1 Visible thinking works even without regular repetition of routines (False)
- 2 A culture of thinking is built gradually (True)
- 3 During assessment, attention should be paid solely to the correctness of the answer (False)

Exercise 10

1C

Exercise 11

Introduce one routine, model thinking, add a second routine, visualize thinking, introduce reflection, conduct classroom self-assessment

Exercise 12

Visible Thinking is an approach that makes students' thinking processes visible. Thanks to routine mental exercises, the language of thinking, reflection, and a safe environment, it helps the teacher develop metacognition, argumentation skills, and learning competencies.

Exercise 13

1b, 2b

Module 5

Exercise 1

Concept-based learning focuses on understanding the relationships between information.

Exercise 2

1B, 2C, 3A

Exercise 3

- 1 If a student can memorize a definition, they automatically understand it (False)
- 2 Facts without understanding are often difficult to transfer to a new situation (True)
- 3 Concepts help to connect individual facts (True)

Exercise 4

- **F (Facts):** Water boils at 100 °C., Bratislava is the capital of Slovakia., $5 \times 6 = 30$, Animals breathe oxygen.
- **K (Concepts):** Temperature change, Motion of bodies, Periodic table of elements, Ratio of the hypotenuse to the leg, Balance in nature

- **P (Principles):** Plants need light for photosynthesis., Bodies move under the influence of force., As temperature increases, substances change their state of matter.

Exercise 5

1b

Exercise 6

Knowledge transfer means using knowledge in a new situation.

Exercise 7

Independence in learning, ability to connect knowledge, knowledge transfer

Exercise 8

1C, 2A, 3B

Exercise 9

Concept-based learning shifts the focus from memorizing facts to understanding principles and connections. It helps the student connect knowledge, use it in new situations, and develop independence in learning. This is precisely why it is an important element in the development of the competence of learning to learn.

Exercise 10

1b, 2b, 3b

Module 6

Exercise 1

- 1 Literacy only means the ability to read a text (False)
- 2 Interpretation and use of information are also part of literacy (True)
- 3 Evaluating information is not important when working with text (False)

Exercise 2

1B, 2A, 3D, 4C

Exercise 3

1. Before reading, 2. During reading, 3. After reading

Exercise 4

What do I already know about this topic? What should I focus on? What do I expect from the text?

Exercise 5

1. During reading, the student should simply read the text to the end. (False)
2. During reading, it is important to pay attention to what is relevant and what I do not understand. (True)

Exercise 6

What have I learned? What was most important? Where can I use this knowledge?

Exercise 7

1A, 2C, 3B

Exercise 8

1B, 2C, 3A

Exercise 9

1c

Exercise 10

The "Think – Puzzle – Explore" routine encourages further exploration of the topic.

Exercise 11

1C, 2E, 3A, 4D, 5B

Exercise 12

1B, 2C, 3A, 4E, 5D

Exercise 13

critical thinking, creativity, synthesis of knowledge

Exercise 14

1: reflection 2: generalization 3: connecting (transfer)

Exercise 15

1: F, 2: C, 3: M, 4: C, 5: M, 6: F, 7: C, 8: F, 9: C

Exercise 16

checking understanding, asking questions, connecting knowledge

Exercise 17

Reading competence includes not only reading but also understanding, interpretation, critical thinking, and metacognition. Text is a tool for thinking that can develop independence, reflection, and deeper learning. Therefore, active work with text significantly supports the competence of learning to learn.

Exercise 18

1a, 2c

Module 7

Exercise 1

2, 5, 6

Exercise 2

1. A lesson aimed at developing learning competence is based on different material than a regular lesson. (False)
2. The difference lies primarily in how the student works with the material. (True)
3. During a lesson developing learning competence, the teacher is solely responsible for its progress. (False)

Exercise 3

the teacher talks for a long time without a break, tasks require only mechanical copying, students wait for the correct result from the teacher

Exercise 4

Content: 1, 3, 7, 8, 10

Competence: 2, 4, 5, 6, 9

Exercise 5

1c

Exercise 6

traffic light for understanding, scale, short reflection questions

Exercise 7

Reflection helps the student realize what they have learned.

Exercise 8

Red: I am lost, I need help. Yellow: I am not sure, I need to check. Green: I understand, I know how to use it.

Exercise 9

1b

Exercise 10

1C, 2A, 3D, 4B

Exercise 11

student independence, rethinking the sequence of actions, responsibility for learning

Exercise 12

A lesson developing learning competence does not focus solely on content, but also on the learning process itself. It is based on four pillars: clear meaning and purpose, activation of thinking, metacognition, and

reflection. The teacher's task is to lead the student toward independence, reflection on their own learning, and taking responsibility for the learning process.

Exercise 13

1b, 2b

Module 8

Exercise 1

1. Competence in learning can be fully verified only by means of a test. (False)
2. The final project combines theory with practice. (True)
3. The project also shows how the teacher reacts to the students' learning process. (True)

Exercise 2

thinking routine, metacognitive questions, conceptual goal

Exercise 3

1b

Exercise 4

1B, 2A, 3D, 4E, 5C

Exercise 5

the opportunity to choose the course of action, working at one's own pace, appropriate responsibility for the result

Exercise 6

1B, 2C, 3A, 4D

Exercise 7

1c, 2c

Exercise 8

1. A good project does not have to take into account the students' age. (False)
2. Realism also means that the lesson is feasible in everyday school practice. (True)

Exercise 9

The final project represents the practical culmination of the entire course. It demonstrates how a teacher can combine theory with practice, plan meaningful teaching, and create conditions in which students learn more independently, consciously, and deeply.

Exercise 10

1b, 2b