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COMPASS
COMPETENCE ASSESSMENT

SET OF BEST PRACTICES

USING THE COMPASS MODEL OF COMPETENCE DEVELOPMENT AND ASSESSMENT

Erasmus+ Project COMPASS: In support of students' competence assessment
No. 2023-1-LT01-KA220-SCH-000156521

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ŠIUOLAIKINIŲ DIDAKTIKŲ CENTRAS
MODERN DIDACTICS CENTRE

MOKYKLŲ TOBULINIMO CENTRAS

LECTURA ȘI SCRIEREA PENTRU DEZVOLTAREA GÂNDIRII CRITICE

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Contents

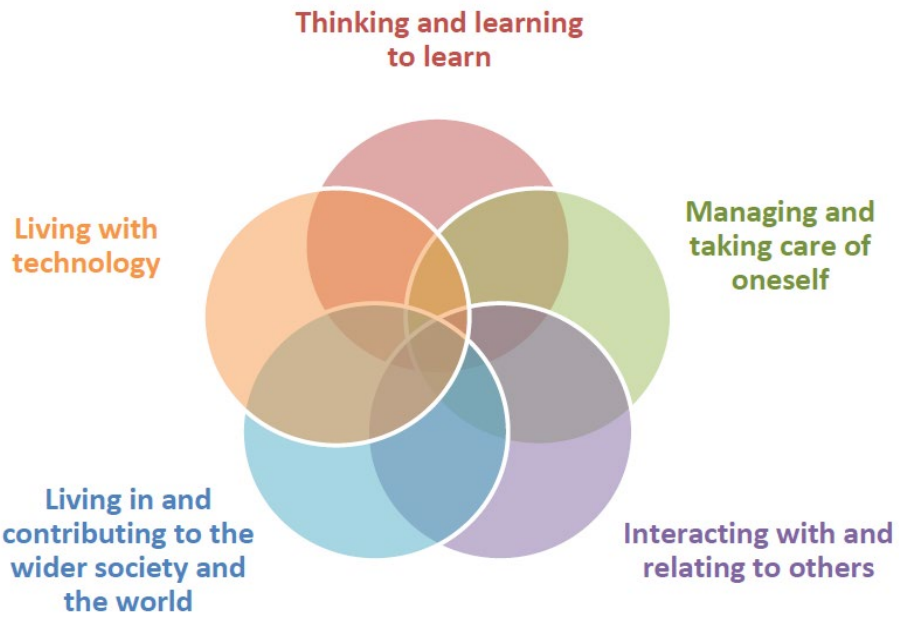
Introduction

The present volume is a selection of 13 good practice examples shared by teachers actively engaged in the COMPASS project. Under the guidance of mentor teachers trained within the project, these teachers used the COMPASS Model and Guidelines for the development and assessment of generic competences. They were guided by the model to plan and teach lessons, and assess learning in a variety of school contexts – in curricular, cross-curricular and extracurricular activities, with students of different age groups – from primary school to upper secondary, including vocational education, within various school disciplines – from language and literature to science and social studies, as well as technical disciplines.

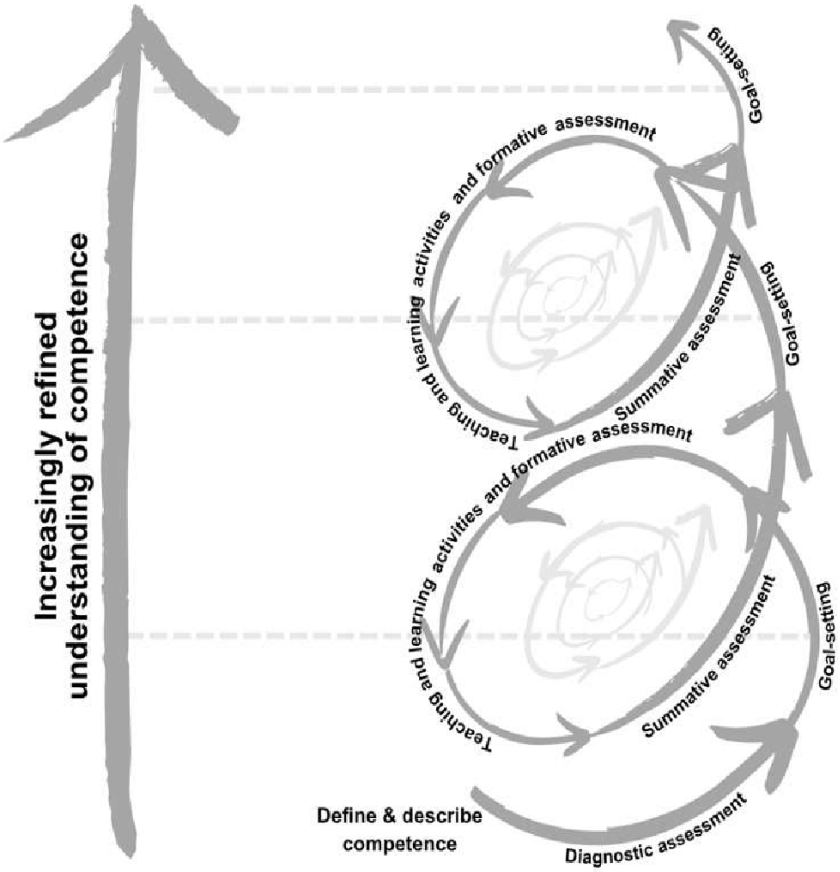
The teachers and mentor teachers who described the practices presented in this collection come from the three countries where the COMPASS project has been implemented: Lithuania, Finland and Romania. As expected, their practices are influenced by their respective education systems. For this reasons, when reading the descriptions of the practices from the different countries, it may be useful to refer to the Brief review of competence development and assessment policies and practices in general education. Cases of Finland, Lithuania and Romania to more fully grasp the contexts in which the good practices were implemented. As is the case with any practice that is deemed good or even outstanding, its quality may be relative to the context where it is observed.

The strength of this volume lies in the fact that teachers share with their fellow teachers, who are the primary readership addressed. However, we believe that our collection may be useful for head teachers, teacher trainers and mentors as well. The present publication includes merely 13 examples to illustrate the COMPASS Model, whereas in the project the teachers shared many more, and in a broader array of school disciplines. For further examples of practices inspired by our proposed model, we recommend that you read the national collections available in Lithuanian, Finnish or Romanian.

Pictures 1 and 2 below representing the five generic competences, and the COMPASS Model of competence development and assessment, respectively, are reiterated for easy reference. For more on the generic competences and a detailed explanation of the COMPASS Model of competence development and assessment, see the publication COMPASS Model and Guidelines for the development and assessment of generic competences.



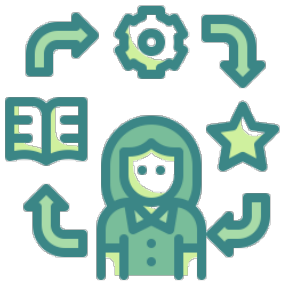
Picture 1. COMPASS generic competences (developed by COMPASS project experts)



Picture 2. The COMPASS Model of competence development and assessment (developed by COMPASS project experts)

The good practices are grouped under the five generic competences listed in Picture 1. Each generic competence is exemplified by at least one set of lessons. However, as can be inferred from the overlapping circles in the visual representation of the generic competences, it should be possible to design a very similar lesson targeting the development of another closely related competence. For instance, the good practice entitled *Task circuit*, implemented in Finnish mother tongue lessons, primarily targets the generic competence "Thinking and learning to learn", but it could be refocused to be used for the development of the generic competences "Interacting with and relating to others" or "Living in and contributing to the wider society and the world". The decision about which competence the practice illustrates best was made depending on what each teacher's primary goal was, which is also made clear by what was assessed.

The good practice examples exceed the limits of merely one lesson or one meeting with the students. This is understandable, since competences take time to develop, as also suggested in Picture 2 above. A series of lessons is built around a topic, with several instances of assessment – diagnostic, formative and summative - and numerous learning activities accompanied by feedback. As the COMPASS Model itself suggests, students implicitly develop their learning skills by being actively engaged in defining or describing the competence, setting their own learning goals, and performing individual and/or group self-assessments and/or peer-assessments.



Selection of good practice examples of using the COMPASS Model

The practices included in the present collection were selected based on a set of five criteria, each with at least one related indicator (see Table 1). The criteria and indicators were defined starting from the COMPASS Model. For a learning activity to be considered good practice, it had to meet each criterion, and check at least one indicator defined for each criterion. However, as space in this publication is limited, in the examples shared it is possible that not each indicator is clearly traceable. The judgment whether the example meets all the criteria for it to be considered good practice or not was made based on ampler presentations of a series of lessons, and not necessarily only the ones shared here. Nonetheless, in the descriptions of the practices some of the authors provided ample information about the broader context and numerous assessment instruments so as to make the learning context they created for their students easier to understand.

CRITERIA FOR GOOD PRACTICE SELECTION	INDICATORS	
Description/definition of specific competence	The competence is described/defined in observable terms.	Specific competence has been defined/described with student engagement.
Relevance of diagnostic assessment tool	The assessment tool is appropriate for assessing the above-described/defined competence.	
Setting goals	Goals have been set based on findings from diagnostic assessment.	
Description of teaching and learning activities (TLAs) and formative assessment	TLAs are conducive to reaching the goals set.	TLAs provide students with ample opportunities and diverse contexts to practice the competence.
	TLAs provide the teacher with ample opportunities for formative assessment (feedback).	TLAs provide the students with ample opportunities for self- and peer-assessment.
Relevance of summative assessment	The assessment tool is appropriate for assessing the competence.	The assessment tool yields information about each students' progress and current level of competence.

Table 1. Criteria and indicators applied in the selection of COMPASS good practices (developed by COMPASS project experts)

For each practice included in this volume, we specify the subject matter which is part of the school curriculum in the respective country, the students' grade and age group, as well as a short presentation of the school.

We hope that you, the teacher, will find the good practice examples described below inspiring as you plan your lessons, your teaching materials and assessment instruments, striving to create the best conditions for your students to develop their generic competences.

We also hope that, if you are a head teacher, a teacher trainer or a mentor, you will find our publication useful as you guide your school staff or fellow teachers through professional development in the specific domain of students' competence development and assessment.

Best practices according COMPASS competence areas

1. Thinking and learning to learn

1.1. Task circuit

Content area: Finnish mother tongue

Students: 3rd grade (aged 9)

School: Viiala Comprehensive School, Akaa, Finland

Author: teacher, COMPASS project mentor Anne Huopainen

About the school

Viiala Comprehensive School is located in Akaa, Finland. It serves as the local school for all children in the Viiala district, providing education from pre-primary to grade nine. In addition, it functions as the lower secondary school for pupils from the Kylmäkoski district. The school has approximately 750 pupils and about one hundred staff members.

Viiala Comprehensive School hosts the city's centralised provision of special education. There are three special education groups: one focusing on instruction based on functional areas, and two groups providing intensive, individualised support. The school also runs a Flexible Basic Education (JOPO) class and a POLKU class designed for students with long-term school absenteeism.

The City of Akaa's curriculum specifies an annual thematic emphasis on transversal competence, with a particular focus on taking care of oneself and everyday skills. For the school year 2025–2026, additional focus areas include L5: Information and Communication Technology (ICT) Competence and L6: Working Life Skills and Entrepreneurship. Each year, the school organises two multidisciplinary learning modules aimed at transcending subject boundaries and enabling cooperation among pupils of different ages. The detailed plans, implementation strategies, and assessment practices for these modules are documented in the school's annual plan.

Introduction

In collaboration with pre-service teacher students, I designed this project for my third graders. I planned to implement it in our small gym, but I believe that the materials could easily be adapted to any school and classroom setting. To make group management and guidance smoother, I decided to run the project in two halves – working with only half of the class at a time.

My aim was to support the pupils in developing their thinking and learning-to-learn competence, based on the transversal competence L1. At the same time, I wanted to give them opportunities to practise interaction skills, expressing their own opinions, and learning how to argue their viewpoints. Through the activities, I also guided them to strengthen their problem-solving and reasoning skills.

Phase 1: Defining the competence

The goal is to develop thinking and learning-to-learn competence. More specifically, the project focuses on interaction skills, expressing opinions, argumentation, and problem-solving and reasoning.

At the start, hold a teacher-led discussion about the competence to be practised. It helps to consider concrete everyday situations where it is used and needed.

- What can you do to make sure everyone gets a turn to speak?
- How can you show someone you are listening to them?
- How can you help a classmate who doesn't dare to speak out loud?
- What can you say if you disagree with someone?
- Can you change your opinion? When and why?
- Why is it important to listen to others' reasons as well?
- How do you begin to tackle a new problem? What do you do first?
- If the group has several options, how do you decide which is best?
- What do you do if the solution doesn't work right away?

Phase 2: Baseline diagnostic assessment

After the discussion, I asked the pupils to assess their own competence with a self-assessment form (Table 2).

Name: _____ Date: _____

ASSESS YOURSELF ON THE FOLLOWING:	I CAN DO THIS WELL ☺	I COULD PRACTISE MORE 😐	I STILL NEED HELP ☹
1. I can state my own opinion.			
2. I give reasons for why I think as I do.			
3. I listen to others' opinions even when they differ from mine.			
4. I can express a differing opinion politely.			
5. I try to persuade others by giving good reasons.			

6. I suggest different solutions to a problem.			
7. I listen to others' suggestions before making a decision.			
8. I don't give up even if the solution doesn't work at first.			

Table 2. Thinking and learning-to-learn competence assessment form

Phase 3: Setting goals

THINKING AND LEARNING TO LEARN	INTERACTING WITH AND RELATING TO OTHERS	LIVING IN AND CONTRIBUTING TO THE WIDER SOCIETY AND THE WORLD
The project aims to strengthen thinking e.g. problem solving and reasoning as well as multi-literacy skills to source, combine, modify, produce and evaluate information in different environments and situations. During the project, pupils produce a text that is used as a tool for self-assessment.	Practising self-expression and social skills; presenting one's opinion constructively and providing reasons.	Practising planning, implementation and evaluation; practising decision-making.

Table 3. Example of settled goals for 3 competence areas

Phase 4: Guidance for practice

I divided the class into small groups of 4–5 pupils. Before moving on to the task circuit, I revisited with them the elements of good teamwork. I reminded them that the stations were playful and applied, and that not everything would go as expected. Together we discussed how their groups should handle "missteps" and failures. Since everyone was heading into the unknown, I encouraged them to bring along a sense of humour.

I also went through the assessment focus and the goals for the circuit. I explained that the task descriptions were written as a narrative, and that they should take these texts with them when heading out to the stations. Later, they could also use the texts for creating their final map and story.

After this starting brief, I led the class to the task area. The groups listened to my whole-group instructions together, and then moved from station to station as spaces became available, completing each station at their own pace.

Phase 5: Practice and formative assessment

Opening scenario

A snail invasion threatens humankind

Newsreader: *"The world faces an extraordinary challenge. Changing environmental conditions have upset evolutionary trajectories, and now huge, suction-proboscised, winged 'glider snails' are spreading disgust—and an immediate danger to the entire ecosystem. The only expert on snail evolution, Dr Esko Kuivakka, has given a TV interview stating he needs at least three weeks to survey the situation and define effective countermeasures. Yet the best forecasts suggest that in three weeks it will be too late—the glider snails will be spreading uncontrollably."*

Dr Kuivakka: *"I confess to some regret as an academic. Perhaps I erred in abandoning my promising snail research a few years ago to study the mating rituals of sawflies. I must now work from a weaker starting point. So far, it appears that recent school food waste is linked to the emergence of glider snails. The new school meals do not appeal to pupils, but they have awakened primitive snail species living in underground layers, allowing them to thrive in waste-management areas. Of course, these life forms would never have evolved without decades of acid rain. A complex dilemma, I'd say."*

Newsreader: *"Citizens are advised to stay indoors and keep salt shakers within reach at all times. Salt is known to be deadly to snails. We continue to monitor the crisis and await an expert action plan."*

After the situation briefing, give instructions for the first task (the first assignment is still delivered to the whole group together).

Instructions before starting the tasks

I set the scene by saying that to fix the situation, the students would need to embark on a journey back in time so that the catastrophe could be prevented. Luckily, I reminded them, this wasn't their team's first physics-defying mission to save Earth. I warned them, however, to make sure they didn't tangle the time continuum—"easy enough", I said with a smile.

To stay sane on their mission, I explained that they must also record their journey on a map. Otherwise, when they returned to their own time, they wouldn't know what had remained unchanged or whether the intended effect had been achieved.

Before departure, I asked them to make some preparations. I emphasized that once in the past, they would need to act decisively and without delay. They would complete different tasks to change the course of events and, hopefully, prevent the snail invasion. "The future," I told them, "is in your hands."

Finally, I reminded them to keep in mind the conditions for good teamwork and to make equal use of everyone's perspectives. I wished them good luck before they began.

The following task station instructions have been designed so that they can be used again without modification.

Task Station 1

Narration, part 1

Groups are presented with three scenarios and must choose one solution path:

"Travel back one week. Using evidence, try to persuade pupils to change their attitudes to the new school meals and reduce food waste (or influence school meal policy). With strong evidence, this could well succeed."

"Travel back a couple of years. Try to influence Dr Kuivakka's career choice so the catastrophe can be prevented in advance. A wise choice in many ways—though your intervention may cause unforeseen shifts either way."

"Travel back decades. Take firm action long before any signs of danger by addressing the acid rain issue. There are many uncontrolled variables with such a big leap, but if it works, this approach could have the greatest impact—fixing more than just the snail dilemma."

Through effective interaction, each group must agree on a solution path. They practise giving reasons, using notes from the opening brief. After making their choice at Station 1, they must remember their route. At the next station, the task is given according to the first route choice. The journey converges to the same end-state: a return to the present with the desired effect.

Narration, part 2

Once you've reached an agreement in your group, you're ready to jump into the time machine and save the world! Or are you? The group member whose name has the most vowels realises you'll need ***evidence****. "Right—otherwise they'll think we're mad. Who would believe snails could learn to fly?" agrees the eldest in your group.*

→ Move to Task Station 2 one group at a time.

Task Station 2

You have access to various materials that could serve as evidence—but you can't access them just like that. The evidence is in the archive cabinet of a notorious hoarder, **Nisse Corner-Lint**. Fearing thieves, Corner-Lint has hidden the right key among decoy keys. You must deduce the correct key using a **mnemonic rule**. Do not try the keys at random or you might trigger the alarm! With the right key you'll find the evidence in the compartments. Think carefully about which piece is most

convincing for your chosen route, and take **only one**. Extra information is a real burden in time travel!

Clues

RED	BLUE	YELLOW	ORANGE
The key is somewhere left from the key of the safe deposit box.	This key is not at either end of the key row	This key is next to the key of the safe deposit box.	This key is in the middle of the row

The "archive cabinet" can be any locked box. Pupils have a key ring with four decoy keys and one correct key. The evidence pieces are three images: (1) school meals then vs now (Picture 3), (2) the title page of Dr Kuivakka's abandoned dissertation *"Prehistoric Ancestral Forms of Snails and the Risk of Their Re-Emergence"*, and (3) an image of the effects of acid rain on underground life forms (Picture 4).

Evidences for Station 2

Evidence 1. "*Cheaper new school meals are often left uneaten by pupils. Their preservatives end up in the soil with the waste. There, the most peculiar life forms feed on them…"*

Dated 4 March 2020.

Picture 3. School lunch

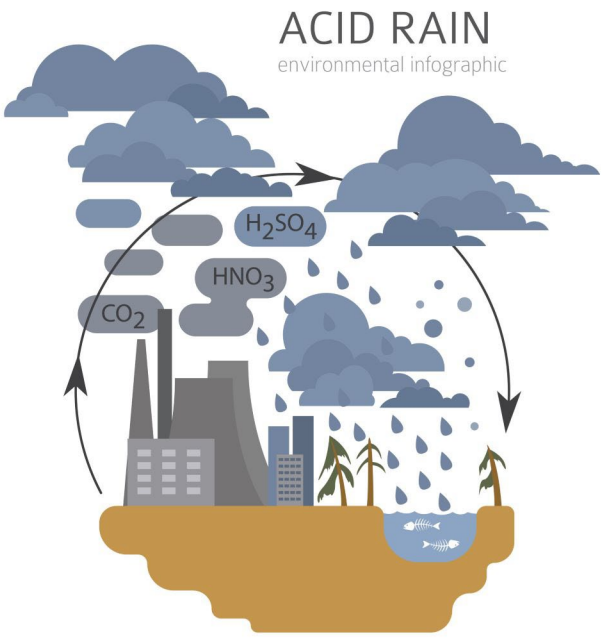
Evidence 2. (Dissertation)

Kuivakka, Esko. *Prehistoric Ancestral Forms of Snails and the Risk of Their Re-Emergence. Department of Nonsense, Dippadappa University, 2015.*

Introduction: *"Today's all-too-common killer snails are arguably the clearest manifestation of evolution's constant drive to seek new variations in existing species. In my research I have traced today's snails back to the age of dinosaurs. A key observation is the ability of the largest species to feed on nearly inedible matter. My hypothesis is that the more inedible the material, the larger the snails it nourishes. Moreover, the greater the amount of such material in a given area, the faster*

snail species evolve there. Could it be that snails feeding on inedible matter evolve towards their ancient forms—contrary to other species? This intriguing conclusion is supported by…" (remainder unavailable).

Evidence 3



Picture 4. Acid rain

"Due to acid rain, new unknown species have appeared in the soil. Some may, over time, develop and rise to the surface." Dated 12 March 1977.

After completing Station 2, the group moves into the "time machine" and then on to the next station for the next narrative segment. Create two implementations of the next station to avoid bottlenecks.

Narration, part 3

Excellent – you've just travelled through an inter-reality wormhole and arrived at a moment when the disgusting snail invasion can still be stopped, provided you handle the coming challenges. Remember: never reveal you're from the future! That would ruin your credibility and risk irreversible time distortions. But then the group member secretly craving tartar sauce with spinach pancakes notices something: the stochastic-equation prediction inverter has fallen off your time machine. Disaster! You mustn't return before fixing it. Luckily, you can replace the gadget with your own knowledge. Simply put on data-bands that measure improbability judgements and complete a few simple estimation tasks. The time machine will collect the data it needs; the return trip will then be… well, almost safe.

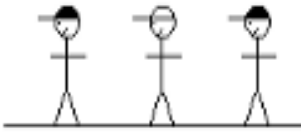
Task Station 3

A simple skill challenge. For example, one group member throws **three balls from three metres** trying to land them in a bucket. After three throws, the group estimates **how many out of ten** would go in (increase difficulty by moving the bucket further). Guide pupils to consider how realistic their estimates are. Again, there is an opportunity to practise reasoning in reaching a shared estimate. Make sure every estimate is heard, with teacher support if needed.

Narration, part 4

With the return trip secured, it's time for the main task. Your plan is to present your evidence ***on live TV*** *in journalist* ***Terho Ehtooturisija's*** *popular show. You hope to reach the widest audience—from decision-making mayors to informed citizens. But on the way to the studio, nerves start to flutter. "In the face of such a mission, earthly fears must be set aside!" declares the group bookworm. You decide to prepare for the worst so small worries won't stop you. Terho is known for surprising questions and challenging guests' knowledge. To convince him, you'll prepare to use* ***discreet, entirely non-verbal communication*** *so that if one of you falters, others can secretly signal help. Brilliant!*

Task Station 4



Now you'll need grey matter and clear logic. Three people stand in a line facing the same direction. Each wears a hat; they know there is one white hat and two black hats. They may not speak and can only see the hats of those in front of them. Their task is to state the colour of their own hat as soon as they know it. Your task is to work out how they can deduce their own hat colour without speaking or seeing it. Test different options in practice. *Hint:* "Sometimes the last in the line is in the best position."

Teacher reveals: "If the last person sees one black and one white hat, they must be wearing black and should call 'black'. The middle person then sees a black hat in front, so they must be wearing white. If the last person sees two black hats, they call 'white'."

→ Move straight to the next task; the next narration comes afterwards.

Task Station 5 — The interview

Pupils answer the "journalist's" (one of the teachers) questions: "What are glider snails?" "Where did they come from?" "How can the future catastrophe be prevented?" Pupils answer using their notes and their chosen evidence. **They must not reveal they are from the future.**

Narration, part 5

Your TV appearance exceeded all expectations! Terho showed genuine interest in your evidence, and soon the programme received calls and statements from multiple experts. If this doesn't achieve the desired effect, nothing will! As seasoned time travellers, you know it's wise to draw a map draft of your route and time, you'll know where things might have gone wrong.

Task Station 6

Pupils complete their map (they may have started during waits between stations) of the route they travelled and write a joint story while "travelling" back in the time machine. While spiralling through time, both the map sheet and a blank A4 circulate around the group. One pupil starts the map; another starts the story. At one-minute intervals (or accelerating), the teacher signals to pass the paper to the next person – even mid-word or mid-drawing. The next pupil must infer what the previous was doing and continue immediately. This jointly created quick story becomes a scaffold for pupils' individual stories.

Alternative: do the rotation only with the map/drawing. Each pupil draws one station's events; rotating drawings makes the map even more playful. The story writing can then be left as an individual task if preferred.

Reflection on the role of the map

I used the map as excellent "busy work" whenever a group had to wait at a station. It allowed me to personalise the task circuit for each group, while keeping the overall story the same for everyone. I instructed the pupils to draw glider snails, depict what they had done at each station, and rehearse the story phases (for example, who had the most vowels in their name). I also gave them prompts on how they might illustrate a challenge they had faced, a flash of insight, or a funny moment.

At the end, I asked the small groups to present the flow of their story, using the map as support. For extra fun, I gave quick scores or mini-evaluations of their group functioning. The scores corresponded to different levels of success, often with a humorous twist (for example, "5–7 pts: You prevented the catastrophe, but your interference with traffic systems means all cars are now two-coloured," or "Your slip-up about time travel sparked a UFO craze").

Finally, I guided the pupils to use the map and their story as a self-assessment tool. They described their group's work along the route, their own role, and the challenges they had encountered.

Phase 6: Summative assessment

In this project, I based the assessment largely on pupil self-assessment. At the end of the work, I asked the pupils to write their own stories about the task circuit and to reflect on their learning and work during the lesson. To support their writing, I provided them with a self-assessment form. On this form, they assessed their competence using symbols; the statements were aligned with both the project's transversal goals and the subject-specific goals.

After the self-assessment, I held a brief one-to-one conversation with each pupil. In this talk, the pupil presented their story to me and explained their self-assessment (Table 4). I, in turn, shared my observations from the lesson with them.

Name: _____

ASSESS YOURSELF ON THE FOLLOWING:	SMILEY ☺	NEUTRAL 😐	SAD ☹
1. While doing the task stations, I expressed my own opinion.			
2. I tried to justify my opinions to others.			
3. I listened to my groupmates and the teacher.			
4. I started new tasks right away at the stations.			
5. I took part in different tasks at the stations.			
6. If I didn't find a solution immediately, I kept trying and didn't give up.			
7. If I didn't find a solution immediately, I boldly asked the teacher or groupmates for help.			
8. At the stations, I tried to solve tasks by **reasoning**, not guessing.			
9. I took part in making the map with my group.			
10. I thought working together on the tasks was fun.			

Table 4. Self-assessment form to reflect students learning and work during the lesson

Open questions

- What did I learn?
- Where do I still need practice?
- How did our group work together?

Phase 7: Setting a new goal

After self-assessment, I hold a whole-class discussion to consider how the competence that emerged in the project can be used in the future, and what observations suggest would be good to practise further. This formed the basis for each pupil to set a new goal.

1.2. Radioactivity

Content area: Physics

Students: 8th grade (aged 14-15)

School: Kaunas Jurgis Dobkevičius Lower Secondary School, Lithuania

Author: teacher Neringa Barauskaitė-Šarkinienė

About the school

Kaunas Jurgis Dobkevičius Lower Secondary School is a holistic education school. It means that education here is based on the premise that the world is an integral whole. It focuses on the physical and spiritual unity of the student and harmonious contact with the world. The school implements the International Baccalaureate PYP (Primary Years Program) and MYP (Middle Years Program). The lower secondary school pays a lot of attention to developing students' competences and values, improving their emotional well-being, and forming a global perspective. Teachers plan the competence development process based on updated general programs, the principles of the International Baccalaureate (MYP), and the learner's individual characteristics.

Participation in the COMPASS project has encouraged teamwork among teachers and reinforced the idea that competence development is a purposeful, systematically created process that requires consistent planning and constant reflection. The biggest change in our school is the lively tradition of reflection in the classroom. This is reflected in the fact that students are encouraged to constantly reflect on their experiences, evaluate their progress, and set personal goals. Teachers use a variety of feedback methods, ranging from individual conversations with students to three-way conversations with parents. Peer assessment and self-assessment are also used, which strengthen responsibility for learning and develop critical thinking. Reflection is integrated into student portfolios, project presentations, and the analysis of assessment criteria, thus creating a profile of a conscious, independent, and motivated learner.

Introduction

I have been a physics teacher for three years now. Although my lessons are planned down to the minute, I want to break the prevailing stereotypes of physics teaching and allow myself to "jazz" during lessons: to enjoy the moment with my students, relax, and improvise. I believe that my final year of doctoral studies in natural sciences allows me to show children the science I have "brought"

from the laboratory, as it is, not textbook-like, sometimes complex, but always engaging. So my lessons are neither quiet, nor easy, but I strive to get my students as involved in learning as possible.

Twenty-one eighth-grade students (10 boys and 11 girls, aged 13 to 15) participated in the lesson cycle. The class is bilingual, with some subjects taught in English and others in Lithuanian. The class includes students with varying abilities. We do not have any students with special educational needs, but some students experience learning difficulties, e.g., they have difficulty concentrating and have weak information analysis and calculation skills.

How did my students and I understand and define competence?

The competence being developed is “Thinking and learning to learn”, which is a Cognitive competence, according to the Lithuanian general curriculum. The main competence developed during physics lessons is Cognitive Competence, which is defined as the motivation and ability to know oneself and the world by acquiring the cultural experience of humankind. This competence consists of four components: subject knowledge and skills, critical thinking, problem-solving, and learning to learn. In our lessons, we focused mainly on developing critical thinking and problem-solving. Solving physics problems teaches students to analyse situations and apply theoretical knowledge in practice. Students learn to evaluate situations and the reliability of information about them and strive to draw logical conclusions.

This is how I presented cognitive competence to students.

Cognitive competence is your desire and ability to be curious, to understand yourself and the world. Think about it this way:

- You want to know: you are interested in how things work, why certain things happen, and who you are. This is motivation.
- You know how to find out: you not only want to, but you also know how to look for information, learn from books, teachers, experiments, or even mistakes. You use what people have already discovered before. That is ability.
- What does this mean for you at school (and in life)?
- Not just "cramming" facts: it is important not only to know dates or formulas, but also to understand why they are the way they are and how they work.
- Think smart: be able to ask "why?", don't believe everything right away, look for evidence (this is critical thinking).
- Solve problems: when something is unclear or difficult, know how to look for solutions (this is problem solving).
- Know how to learn: understand how you learn best – perhaps by listening, reading, or experimenting? And learn from your mistakes, rather than fearing them.
- Seeing the big picture: understanding how different subjects (e.g., physics, biology, history) are related and help explain the world.

In short, Cognitive competence is necessary to be a curious explorer who knows how to learn, think, and understand yourself and the world around you.

How did we have to prepare?

Both my students and I had to prepare for targeted cognitive competence development. I developed a diagnostic assessment tool – a questionnaire – to help students assess their initial level in each competence area. I selected active, inquiry-based activities that encourage student engagement, independence, and reflection. I planned formative and summative assessment methods based on IB (International Baccalaureate) criteria (A–D) to monitor progress in all areas of cognitive competence.

What evidence did we have about the learning situation? Where were we?

Before the lesson cycle, students completed a questionnaire that helped them reflect on their knowledge, abilities, and learning habits. My task was to help students understand what cognitive competence means by providing specific examples (e.g., the ability to ask questions, search for answers, and evaluate information). I also encouraged them to plan their learning and apply various strategies (e.g., systematizing information, reflection) rather than just seek the correct answer. Clarifying the elements of cognitive competence allowed students to actively engage in the learning process, developing not only subject knowledge but also the ability to think critically, solve problems, and reflect on their learning, which is the essence of cognitive competence.

To assess cognitive competence before the lesson cycle, I gave the students a 20-question questionnaire (Annex 1). I linked the questions to the individual components of cognitive competence and specific issues related to the topic of the lesson cycle. I created the questionnaire based on the physics course presented in the General Education Programs, using the generative artificial intelligence tool Google AI Studio. The students rated the statements on a 4-point scale reflecting their level: 1 – strongly disagree: I feel that I am struggling in this area; 2 – mostly disagree: I feel that I need a lot of help in this area; 3 – mostly agree: I feel fairly confident, but sometimes need help; 4 – completely agree: I feel very confident and can help others.

Assessment of cognitive competence at the end of the lesson cycle: I asked the students the same 20 questions again to compare the changes. In addition, I asked the students to indicate which of the tasks performed during the cycle (tasks on the topic of radioactivity, debates, project-based practical work, virtual visit to the IAE, and test) helped to develop specific elements of cognitive competence.

What did we want to achieve? In how much time?

During the "Radioactivity" lesson cycle, we aimed to develop cognitive competence in a targeted manner, and student progress was assessed according to four International Baccalaureate criteria in the field of natural sciences: A (knowledge and understanding), B (investigation and creation), C (processing and evaluation), D (evaluation of the impact of science). The cycle lasted from January to March 2025 and included 18 contact lessons.

How did the students gain experience in developing their competences? (tasks, activities, etc.)?

Cognitive competence development was integrated into various tasks:

- Solving problems on the topic of radioactivity.
- Project-based practical work "Nuclear Power Plants" (information search, work with sources, formative assessment. The work aimed to find out how nuclear power plants work and to familiarize oneself with statistical data on nuclear energy.
- Research on the Ignalina Nuclear Power Plant. The work aims to visit the Ignalina Nuclear Power Plant virtually[1], collect data on the past, present, and future of the power plant, and draw conclusions.
- Debate on nuclear energy (Annex 2).

How did I help students develop self-awareness and competences? How did they know that specific competences were being developed? To what extent and at what level?

I provided students with feedback when they completed these tasks:

- At home and in class, they solved problems related to the topic of radioactivity;
- They carried out a practical project entitled "Nuclear Power Plants." Students searched for information, worked with articles and online sources, and took a virtual tour of the Ignalina Nuclear Power Plant.
- They participated in debates on "Nuclear Energy."

The practical work revealed the students' ability to independently search for information, systematize it, and apply it in practice. During the debate, students demonstrated their ability to argue, evaluate information, and think critically. The students received feedback that helped them understand their strengths and areas for improvement. When providing feedback, I emphasized not only academic results, but also the thought process, effort, and application of strategies. This helped students better understand their learning path and identify what they had improved.

How did students learn what competence they improved and to what level?

Students learned about their progress and improved competence through self-assessment activities that were integrated into the entire "Radioactivity" lesson cycle. The assessment focused not only on the final result, but also on learning to learn and self-reflection skills. The summative assessment was not only a test of knowledge but also a conscious reflection on the learning process, allowing students to identify their progress, strengths, and areas for improvement.

At the end of the lesson cycle, students once again completed the same 20-question questionnaire, which was linked to four cognitive competence areas: a) knowledge and skills; b) critical thinking; c) problem solving; d) learning to learn. Students were able to compare their answers and assess the

[1] Ignalina Nuclear Power Plant. (2023). *Virtual tour*. https://virtual.iae.lt/

areas in which they had made progress. Students were asked to indicate which activities (task solving, debates, practical project work, virtual visits, tests, etc.) helped them develop specific competence. This encouraged conscious analysis of the learning process and helped my students link activities to the skills they had acquired. The survey revealed that students have a better understanding of the basic concepts of radioactivity, are better able to assimilate, systematize, and evaluate information, and are able to engage in reasoned discussion.

Final remarks

After reflecting on the students' learning in this cycle, I realized that they still lack conscious engagement in learning and the ability to plan, reflect, and apply various learning strategies. They feel least confident in the area of practical calculations. Students successfully developed their thinking and ability to relate theory to real-life situations. The teaching strategies used were effective because, based on the competence assessment criteria used, not only did their understanding of the subject matter improve, but their self-confidence in all elements of cognitive competence also increased.

What I will do next:

- I will strengthen students' calculation skills: I will devote additional time and attention to practical calculation tasks. I may apply more diverse methods: working in pairs, differentiated tasks, use of visual aids, or simulations.
- I will maintain a high level of critical thinking: I will continue to organize discussions and debates and encourage critical evaluation of information sources not only in this subject but also in other subjects.
- I will encourage the application of knowledge: although progress has been made, I will continue to look for ways in which students can apply the knowledge they have acquired in practice (e.g., small research projects, project work on the application of radioactivity in medicine and industry).
- I will use self-assessment: I will continue to prepare similar self-assessment questionnaires before and after studying each chapter. This not only provides valuable information to the teacher, but also encourages students to reflect on their learning and see the progress they are making. A few open-ended questions could also be included so that students can comment on their assessments.
- I will briefly present the summarized class results to the students, emphasizing the overall progress and areas where more effort is needed. This can motivate them and show them the meaning of learning.

What I recommend to other teachers:

1. The concept of "cognitive competence" is poorly understood or completely unknown to 8th grade students, too abstract, and they tend to equate it with individual elements of competence. Eighth graders define this concept through individual abilities or parts of the learning process (e.g., the ability to learn, understand, select information, and discover new things). It is difficult for students to perceive cognitive competence as an integral whole, encompassing not only the acquisition of

knowledge, but also its application, problem solving, critical thinking, information evaluation, choice of learning strategies, and reflection.

2. The concept of cognitive competence must be presented to students in simple terms and through specific examples:

- Instead of talking only about general competence, emphasize its components: curiosity, the ability to ask questions, observe, collect and evaluate information, analyse, draw conclusions, think critically, solve problems, and creatively seek solutions.
- Integrate into activities: consciously plan lessons and tasks so that students not only acquire knowledge, but also actively use and develop elements of cognitive competence. These can be problem-based questions, research, projects, discussions, or experiments that require hypothesizing, analysing data, and looking for patterns.
- Ask questions that encourage students to reflect on their learning process: "How did you understand this?", "What steps helped you solve this problem?", "What was the most difficult and how did you overcome the difficulties?", "What would you do differently next time?".
- Provide feedback: when evaluating students' work, pay attention not only to the final answer, but also to the thought process, the questions asked, the search for information, the reasoning – in other words, the demonstration of cognitive competence.
- Use visualizations: perhaps create a diagram or mind map of what constitutes cognitive competence to make it easier for students to visualize and remember.
- Teachers should create a learning environment dominated by active, engaging, and problem-based tasks that encourage students not only to master facts, but also to critically analyse them, apply them, solve real problems, and take responsibility for their own learning process.

Picture 5. Debates on nuclear energy

ANNEX 1. Cognitive competence self-assessment questionnaire

At the beginning of the lesson cycle, students completed a questionnaire that allowed them to reflect on their knowledge and sparked their interest in cognitive competence. This preparation allowed students to actively engage in the learning process, developing not only subject knowledge but also the ability to think critically, solve problems, and reflect on their learning.

For the initial (basic) assessment of cognitive competence, a questionnaire of 20 questions was created (Table 5), with statements rated on a 4-point scale, where:

1 – Strongly disagree: I feel that I am having great difficulty in this area.

2 – Mostly disagree: I feel that I need a lot of help in this area.

3 – Mostly agree: I feel fairly confident, but sometimes need help.

4 – Strongly agree: I feel very confident and can help others.

The questions were related to different cognitive competence structures and topics ("Radioactivity") that were going to be taught. The questionnaire was developed in accordance with the BUP Physics program. The generative artificial intelligence tool Google AI Studio was used to create the questions and analyse the answers.

QUESTIONNAIRE STATEMENTS before starting the chapter (rated on a 4-point scale, where *4 = Strongly agree: I feel very confident and can help others; 1 = Strongly disagree: I feel that I am having a lot of difficulty in this area).*

Introductory question: How do you understand "cognitive competence"?

	1	2	3	4
I. Cognitive competence framework: Subject knowledge and skills				
1. I understand the types of radioactivity (alpha, beta, gamma) and their properties.				
2. I can explain the concept of half-life and its application.				
3. I understand the principles of nuclear fission and nuclear fusion.				
4. I know how nuclear reactors work and how they are used.				
II. Cognitive competence framework: Critical thinking				
5. I can critically evaluate information about the advantages and disadvantages of nuclear energy.				
6. I can distinguish between facts and opinions when discussing radioactivity and nuclear energy.				

7. I can discuss the safety and environmental impact of nuclear energy in a reasoned manner.				
8. I understand the ethical aspects of the use of radioactivity in medicine and other fields.				
III. Cognitive competence framework: Problem solving				
9. I can calculate the radioactivity of a substance after a certain period of time, knowing its half-life.				
10. I can propose solutions to the problem of nuclear waste management.				
11. I can analyse the consequences of a nuclear accident and propose preventive measures.				
12. I can apply my knowledge of radioactivity to solve practical problems.				
IV. Cognitive competence framework: Learning to learn				
13. I can independently find information about radioactivity and nuclear energy.				
14. I can effectively learn new concepts related to nuclear physics.				
15. I can critically evaluate different sources of information about radioactivity.				
16. I can summarize and systematize the knowledge I have acquired about radioactivity and nuclear energy.				
V. Final questions				
17. Assess your level in this area: Subject knowledge and skills (radioactivity).				
18. Assess your level in this area: Critical thinking.				
19. Assess your level in this area: Problem solving.				
20. Assess your level in this area: Learning skills.				

Table 5. Questionnaire for students' knowledge reflection

After completing the chapter and all the tasks in it, students are asked the same questions, but with the following additions:

- Please indicate which of the tasks completed during the chapter helped to develop specific elements of the "Cognition" competence.
- Additional question: "How do you feel you have improved your Cognition competence during this chapter? (5 – I feel I have improved a lot and learned a lot, 1 – I feel I have not improved at all and have not learned anything)".

RESULTS OF THE COGNITIVE COMPETENCE ASSESSMENT

Twenty-one 8th grade students participated in a series of lessons designed to develop cognitive competence experiences. Participants were asked 20 questions, which required them to evaluate statements on a 4-point scale (where 4 – *I completely agree: I feel very confident and can help others; 1 – I completely disagree: I feel that I am having a very difficult time in this area).*

How did the students understand what "cognitive competence" is?

A third of the class did not understand what this concept meant at all and answered: "I don't understand", "I find it difficult to understand." A superficial understanding/focus on knowledge/learning was reflected in the answers of another part of the class (about 28%): "How you know something", "Ways to learn something", "How many new things I learned", "How much you can know", "Selection of knowledge". The responses also reflected understanding through the learning process/abilities (about 24%): here the responses are deeper and related to actions and abilities: "When you learn to know new things", "How well you can understand", "The ability to learn and recognize new, unknown areas", "The ability to understand." These students understand that this is related to learning and understanding as an ability.

Several answers (about 12%) show a more mature understanding, covering not only the acquisition of knowledge, but also its deeper understanding and thought processes:

"Cognitive competence is deepening knowledge, knowing, improving" (associated with process and growth).

"When you learn to recognize new things, critical thinking and problem solving" (answer involving higher-level thinking skills).

"The ability to know yourself, or what you are learning" and "That by learning a subject, you may get to know yourself better?" (relates to the learning process and self-awareness).

Analysis of responses according to the Cognitive Competence Framework

I. Subject knowledge and skills

Before: before starting the chapter, students felt least confident in the area of "subject knowledge and skills." The average ratings ranged from very low (1.86 – "Mostly disagree/need a lot of help") in response to the first two questions (types of radioactivity, half-life) to slightly higher (2.38 – between "need a lot of help" and "fairly confident") when talking about nuclear fission/fusion and (2.62) nuclear reactors. This shows that the topic was new and complex for the students.

After: after studying the chapter, confidence in their knowledge and abilities increased significantly. The averages rose to 3.10 (types of radioactivity), 2.95 (half-life), 3.43 (fission/fusion) and 2.95 (reactors). Now, on average, students feel "fairly confident" (3) or even closer to "completely confident" (4) in their understanding of these concepts.

This competency improved the most during the course. Students acquired essential subject knowledge and skills, especially related to basic concepts of radioactivity.

II. Critical thinking

Before: Before starting, students' confidence in their critical thinking skills in this area was average. The averages ranged from 2.29 ("needs a lot of help“, ethical aspects) to 2.95 (distinguishing between facts and opinions). This shows that students had some opinion about the duality of the topic, but lacked the knowledge to make a reasoned assessment.

After: critical thinking skills also improved significantly during the study. All averages rose above 3.0–3.38 (advantages/disadvantages), 3.38 (facts/opinions), 3.52 (discussion about safety) 3.10 (ethical aspects). Students now feel "fairly confident" in evaluating information, discussing and understanding ethical issues.

Critical thinking skills have been successfully developed. Students have not only gained knowledge, but also feel more capable of critically evaluating it and applying it in discussions on complex social and ethical issues.

III. Problem solving

Before: this was the area in which students felt least confident, especially when it came to practical calculations (average 1.81 – the lowest of all questions!). Other aspects, such as waste management (2.29) and knowledge application (2.33), also showed low confidence. Interestingly, the analysis of nuclear accidents (2.90) was rated highest in this group even before the training began.

After: confidence in problem-solving abilities increased significantly. Although calculations (2.81) remained the area with the lowest average after training, there was significant progress here (a difference of exactly 1.00). In other areas, the averages rose well above 3.0: 3.24 (radioactive waste solutions), 3.67 (accident analysis – the highest average of all questions after training!), 3.19 (application of knowledge).

Problem-solving skills were successfully developed, especially in the area of problem understanding (waste, accidents). Practical calculations, although they improved the most in percentage terms from the starting point, remained the area in which students felt least confident.

IV. Learning to learn

Before: confidence in learning to learn skills in this subject was average, but relatively higher than subject knowledge or problem solving. Averages ranged from 2.52 (evaluation of information sources) to 2.81 (learning new concepts). This shows that students had general learning skills but were unsure about their application to this specific topic.

After: after the learning process, confidence in all aspects of learning to learn rose above 3.0: 3.38 (finding information), 3.29 (learning concepts), 3.33 (evaluating sources), 3.19 (summarizing). Students feel "quite confident" in their ability to learn this topic independently.

The learning skills were also successfully improved. Students not only gained knowledge, but also strengthened their confidence in their ability to independently search for, evaluate, master, and systematize information about radioactivity.

Critical thinking skills. Students were asked the question: "Mark which tasks in this chapter you think helped improve your critical thinking skills."

95% of students said that the debate on nuclear energy helped them develop this skill the most. It is clear that students identified debates as the most effective activity for developing critical thinking skills.

62% chose the test and preparation for it. Although tests are often associated with knowledge assessment, the high selection of this activity as a means of developing critical thinking shows that preparing for tests helps students to analyze and systematize information more deeply, to think about it critically, rather than just memorizing it mechanically. The test itself could include tasks that required not only the repetition of knowledge, but also its application, analysis, and synthesis.

Problem-solving skills. Students were asked the question: "Mark which tasks in this chapter you think helped you improve your problem-solving skills".

90% of students said that the debate "Nuclear Energy" helped them develop this skill the most. This shows that students associate problem solving not only with mathematical or technical tasks, but also with the analysis of complex, real-life issues.

57% chose homework and tasks solved during class, as well as information search and work with sources (project-based practical work "Nuclear Power Plants"). Solving problems directly develops the ability to apply knowledge to specific tasks, which is an essential part of problem solving in physics. Searching for information and working with sources during the project encourages students to identify information gaps (problems), search for reliable sources, analyse data, and draw conclusions in order to solve or answer the questions posed in the task (e.g., understand how a nuclear power plant works, the causes of incidents).

Learning to learn skills**.** Students were asked the question: "Mark which tasks in this chapter you think helped you improve your learning to learn skills".

86% of students said that the test and preparation for it helped them develop this skill the most. This shows that students strongly associate the ability to learn with responsibility for their knowledge and preparation for assessment. Preparing for a test requires systematizing and summarizing knowledge (the entire chapter must be systematized); the selection of learning strategies (choosing the most effective ways to repeat, understand, and master information); self-reflection (when preparing for a test, students often assess what they already know and what they still need to learn, identifying gaps).

71% chose homework and tasks completed during class. When solving tasks, students applied their acquired knowledge in practice, reinforced new concepts, and learned from their mistakes.

Subject knowledge and skills. Students were asked the question: "Mark which tasks in this chapter you think helped you improve your 'subject knowledge and skills'".

95% of students said that the debate "Nuclear Energy" and the virtual visit to the Ignalina Nuclear Power Plant helped them develop this skill the most. This shows that students highly value active, contextual, and critical learning in order to acquire subject knowledge.

86% chose test preparation and preparation for it. Preparation for a test directly requires systematizing and repeating all the knowledge and skills of the chapter. The test itself is designed to check whether students have learned the facts and concepts specified in the program and are able to apply rules and algorithms. This is an essential part of consolidating knowledge.

ANNEX 2. Debate "Nuclear energy"

Learning objective: to gather information on the given topic, prepare three arguments for/against the given statement and present them convincingly during the debate.

Debate objective: to convince a third, neutral group of judges that your arguments are better than those of your opponents.

Debate statements:

Lithuania needs nuclear energy.

Nuclear energy is superior to other energy sources.

The debate statement and the for/against group are assigned to each student at random. Groups may be changed by mutual agreement (after notifying the teacher).

Presentation type: The information and arguments found are presented in the Teams group **BEFORE** the presentation day. Arguments are presented at the specified time, according to the principles of debate.

Presentation date: the exact date for each group will be provided separately.

Each student will be assessed INDIVIDUALLY.

PREPARING ARGUMENTS

THREE arguments FOR or AGAINST (depending on the group) are presented for a randomly selected statement.

The arguments are neatly presented in the specific table. The work is prepared using Microsoft Word or the equivalent program for Apple computers ***(0.5 points).***

The text of the arguments MUST NOT BE PLAGIARIZED (no more than 5 words in a row may coincide in the work and the source). If the source is in Lithuanian, the sentences must be paraphrased and rewritten in your own words. YOU CANNOT SIMPLY COPY THE TEXT. P.S. The work will be checked using software that checks not only for plagiarism, but also for the extent to which the text has been written using artificial intelligence. The work cannot contain more than 10% plagiarism and more than 40% AI-written text ***(6 points)***.

When presenting an argument, it must be based on reliable information (Wikipedia **is NOT** a reliable source of information). When preparing an argument, it must be based on statistical, scientific, or other reliable information. When presenting an argument, the source on which the fact is based (author and year) must be provided.

An argument consists of:

- Statement ***(2 points)***.
- Explanation of the statement ***(2 points)***.
- Supporting evidence ***(2 points)***.
- Conclusion related to the topic ***(2 points)***.

Sources used must be cited: source title, author, year, and reference. *It is NOT ENOUGH to simply insert a reference (example provided in the template).* ***(3 points)***.

The text is written without grammatical errors. ***(1 point).***

The document must be uploaded to the Teams system **BEFORE** the presentation date. For each *day of delay, 2 points will be deducted from the total score.*

Formatting requirements:

Text font: *Times New Roman,* size: 12 pt ***(1 point)***.

Line spacing in the text: 1.5 pt ***(0.5 points)***.

Bonus *2 points:* an image/meme related to the topic created by artificial intelligence is uploaded to the work. Note: the source, i.e., which AI/program was used to create the image, is written below the image.

DEBATES

The debate method is designed to teach students to analyse problems and, by participating in (organizing and conducting debates), to seek possible solutions, develop critical thinking, empathetic listening, and respect for those who have different opinions. The goal of the debate is to convince a third, neutral group of judges that your arguments are better than those of your opponents.

Parts of a debate:

Resolution (topic)**.** In order for any discussion to take place, there must be something to discuss. In educational debates, this is called a resolution.

Affirmative side. In a debate, the affirmative side or sides try to convince the judge that the resolution is always or usually correct.

The negative side. The negative side seeks to prove to the judge that the resolution is false or that the affirmative side is interpreting it incorrectly or inappropriately.

Arguments. The best way to prove the correctness of your position is with arguments. This means that you give the judge a reason to believe in its correctness. Arguments can be weak or strong. Of course, you will want to formulate the strongest, most convincing arguments. The judges will want

to see that you have thought through both your own and your opponents' arguments very carefully and that your arguments can withstand your opponents' attacks.

Evidence. Along with the arguments, it is necessary to provide evidence to support the team's reasoning. In debates, evidence is found by seeking expert opinions on one argument or another.

Cross-examination. In most cases, although not always, each debater is given the opportunity to respond to their opponent's questions. Questions can help clarify the opponents' position and reveal weaknesses in their arguments. Your partner can use the information obtained here in their speech.

Decision. After listening to the debate and the arguments of both teams, the judges mark on their ballots which team has better proven its position, i.e., which team has won.

COURSE OF THE DEBATE

Part I. Presentation of arguments. 20 min.

The first speaker of the "FOR" team (U1) presents ONE argument and the information supporting it (1 min.).

The first speaker for the "AGAINST" team (P1) refutes the U1 speaker: highlights inaccuracies, incorrect statements, and emphasizes why the U1 speaker's argument is incorrect. Then he presents ONE of his "AGAINST" arguments and the information supporting it (1 min.).

The second speaker for the "FOR" team (U2) opposes the P1 speaker: highlights inaccuracies, incorrect statements, and emphasizes why the P1 speaker's argument is incorrect. Then they present ONE of their "AGAINST" arguments and the information supporting it (1 min.).

The second speaker for the "AGAINST" team (P2) counters the U2 speaker: highlights inaccuracies, incorrect statements, and emphasizes why the U2 speaker's argument is incorrect. Then they present ONE of their "AGAINST" arguments and the information supporting it (1 min.).

This "chain" of speakers continues until each member of the "FOR" and "AGAINST" teams has presented one of their arguments. It is recommended that the arguments presented do not repeat each other or supplement the ideas previously expressed with new information or evidence.

Part II. Cross-examination. 8 min.

After presenting their arguments, each team "FOR" and "AGAINST" has 3 minutes to discuss the main points of the team's arguments and select one speaker who will present them and participate in the cross-examination. The use of electronic devices is prohibited during the discussion.

After 3 minutes of consultation within the teams, 5 minutes are allocated for cross-examination – each team representative presents their argument and may ask questions, and the representative of the opposing team answers them. The team representative who receives a question may pass it

on to a member of their team to answer. There are no restrictions on the order of speaking or the time allowed, but it is important not to interrupt each other and to behave politely.

Part III. Summary. 5 min.

After the cross-examination, each team, "FOR" and "AGAINST", has 3 minutes to discuss their final statements and conclusions (max. 3) and select one speaker to present them. The use of electronic devices is prohibited during the discussion.

The final statements and team conclusions are presented by the representative of the "FOR" team. The representative's goal is to convince the audience that their team's position was stronger (1 min.).

The final statements and conclusions of the team are presented by the representative of the "AGAINST" team. The representative's goal is to convince the audience that their team's position was stronger (1 min.).

Part IV. Voting. 3 min.

All debate observers vote on which team, "FOR" or "AGAINST", won the debate.

SUMMARY EVALUATION OF THE DEBATE

The following International Baccalaureate criteria are assessed during the assessment: A (knowledge and understanding), B (investigation and creation), C (processing and evaluation), D (assessment of the impact of science). The criteria for evaluating the arguments (Table 6) and the course of the debate (Table 7) are presented below.

Part I. Preparing arguments

CRITERION	POINTS	DESCRIPTION
Presentation of arguments in *Teams platform*	3.5	3 Arguments are neatly presented in the specified table (3 points, 1 point for each argument). The work is prepared using *Microsoft Word* or the equivalent program for *Apple* computers. The document is uploaded to the *Teams* platform **BEFORE** the presentation day. For each *day of delay, 2 points will be deducted from the total score.*
Academic integrity	6	The text of the arguments MUST NOT BE PLAGIARIZED (no more than 5 words in a row may coincide in the work and the source). If the source is in Lithuanian, the sentences must be paraphrased and rewritten in your own words. DO NOT SIMPLY COPY THE TEXT. The work must not contain more than 10% plagiarism and more than 50% of the text written by DI.
Structure of the argument	8	The argument consists of: Statement (***2 points***). Explanation of the statement (***2 points***). Supporting evidence (***2 points***).

		Conclusion related to the topic (***2 points***).
Text	2.5	The text is written in Lithuanian, without grammatical errors ***(1 point).*** Text font: *Times New Roman,* size: 12 pt (***1 point***). Line spacing in the text: 1.5 pt ***(0.5 points).***
Sources used	3	Sources of information used must be provided: source name, author, year, and reference. *It is NOT ENOUGH to just include a reference (example provided in the template).*
Bonus	2	An image/meme created by artificial intelligence related to the topic is included in the work. Note: the source is indicated below the image, i.e., which AI/program was used to create the image.
Total for Part I: 23 points + 2 bonus		

Table 6. Debates arguments evaluation criteria

Part II. Participation in debates

The argument is presented to classmates at the specified time (*if you choose not to participate in the debate/do not attend the presentation, only the first part (preparation of arguments) will be evaluated).*

CRITERION	POINTS	DESCRIPTION
Presentation of arguments	5	Clarity, coherence, persuasiveness, and cultural awareness of language. When presenting, read as little as possible from prepared notes. Try to speak in your own words.
Time management	3	Presentation of arguments within the allotted time.
Creativity and originality	4	Unexpected, interesting arguments, original form of presentation.
Responses to opponents' arguments	5	Ability to respond accurately to opponents' arguments, refutation of arguments.
Teamwork	3	Team members' cooperation, mutual support, supplementing arguments rather than repeating them.
Ethics and respect	3	Respectful behaviour towards opponents, no interruptions, polite communication *(2 points will be deducted for each instance of disrespectful behavior)*.
Total for Part II: 23 points		

Table 7. Debate tournament evaluation criteria

Total possible points: 46 points + 2 bonus points

1.3. Learning to learn in technical studies

Subject area: Electrical Measurements in Direct Current Systems

Students: 9th grade (aged 15-16)

School: Colegiul Tehnic Energetic Cluj-Napoca, Cluj County, Romania

Author: teacher, COMPASS project mentor Anca Petriuc

About the school

Colegiul Tehnic Energetic is a secondary education institution that offers two distinct pathways: a 4-year technical high school program and a 3-year dual vocational training program. Its curriculum is thoughtfully structured to cultivate a broad spectrum of competences. Through both the national core curriculum and locally designed curricula, the school prioritizes discipline-specific skills while also fostering essential general competences that support students' holistic development.

Competency assessment is approached in an integrated manner, taking into account both theoretical knowledge and the practical abilities students gain throughout their educational journey. The school actively engages in initiatives and projects aimed at modernizing teaching methods and aligning education with the evolving demands of the labour market.

A strong focus is placed on each student's personal growth and hands-on training – particularly within the dual education system, where close partnerships with industry stakeholders ensure that students receive relevant preparation and transition smoothly into the workforce.

Unlocking tech through learning

The Year 9 curriculum for the subject *Electrical Measurements in Direct Current Systems* introduces a structured set of concepts aimed at fostering technical proficiency. A key focus of the programme is nurturing the competence of learning to learn through a variety of instructional and evaluative activities. This is demonstrated by students' ability to organize their individual study plans, identify appropriate resources – such as textbooks, diagrams, and online simulations—and track their progress in mastering the material.

In problem-solving scenarios and hands-on experiments, students are encouraged to take ownership of their learning, actively explore solutions, and critically assess their outcomes. Cultivating the learning to learn competence in this technical context involves recognizing personal

learning styles, setting achievable goals for understanding electrical circuit principles, managing time effectively for study and practice, and carefully selecting suitable learning tools.

To support this approach, a dedicated learning unit titled *Measuring Electric Current Intensity* was planned. It integrates foundational theoretical knowledge with the promotion of self-directed learning. The unit includes individual problem-solving exercises, practical laboratory work emphasizing planning and documentation, and self-assessment strategies designed to enhance students' autonomy and accountability throughout the learning process.

How do I and my students name and describe the specific competence to be developed?

For the initial assessment of Year 9 students on the generic competence *Learning to Learn* within the subject *Electrical Measurements in Direct Current Systems*, I designed an interactive activity. Students collaborated in pairs, engaging in open discussions about their personal interpretations of this key competence. Following this brief exchange, each pair contributed to a cluster diagram previously outlined on the board, summarizing their insights. This visual strategy enabled the swift collection of diverse student perspectives on the concept of learning to learn.

How do I and my students know what evidence highlights the state of a specific competence?

By closely examining the ideas mapped out in the cluster, we were able to identify a set of clear, actionable objectives aimed at fostering this competence within the technical framework of the subject.

Setting personal goals. Students were guided to establish clear, specific, and measurable objectives related to their understanding of the subject matter. These goals helped focus their learning and track progress.

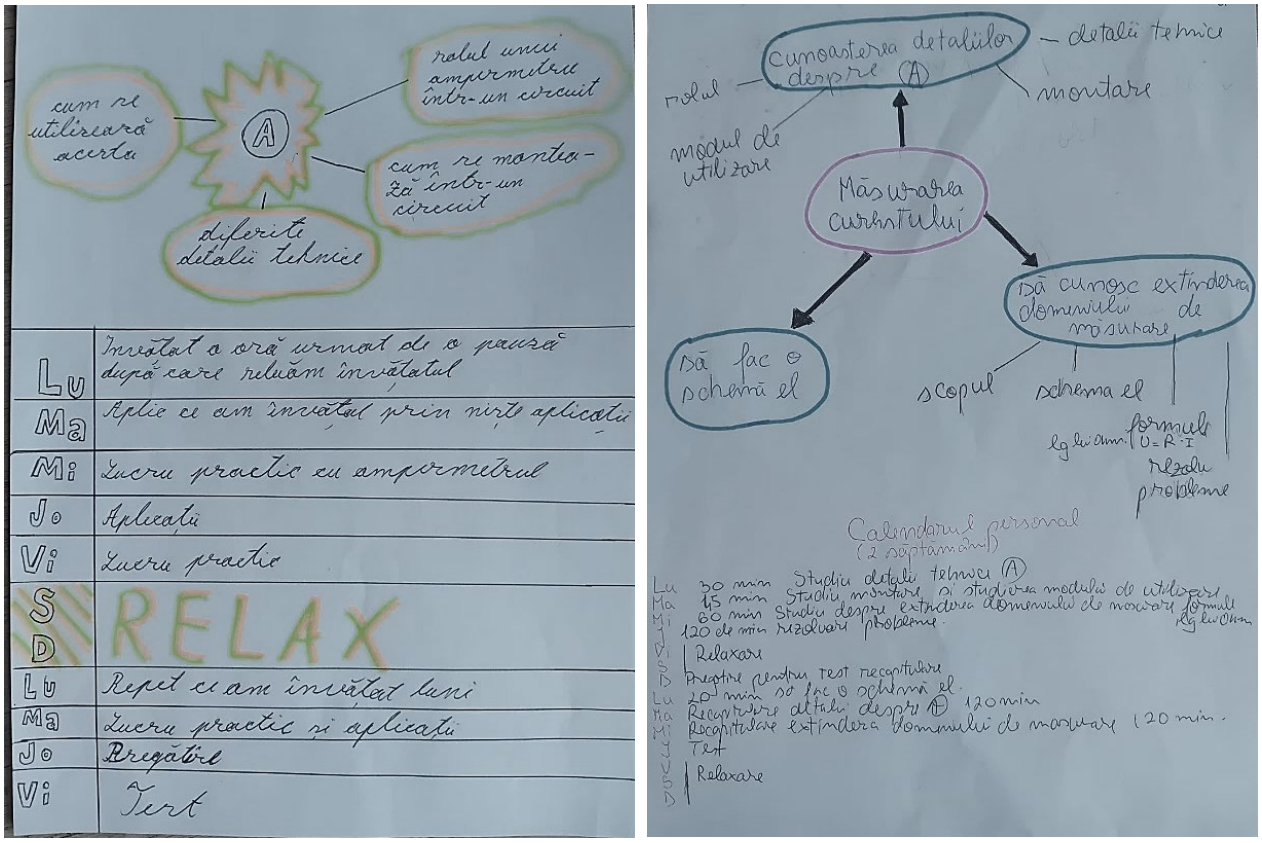
Examples include:

- *Accurately understanding and applying relevant formulas.*
- *Successfully assembling an ammeter by the end of the week.*
- *Learning and recalling Ohm's Law by the next lesson.*
- *Gaining a clear understanding of how an ammeter functions.*

How do my students develop competences: a) how do they need to be prepared and what do I need to do to prepare my students?

Planning and organising learning. To promote effective time and resource management, students were instructed to design personalised learning calendars. These schedules included dedicated time slots for studying, creating graphic organisers to summarise key concepts, completing homework, and preparing for assessments. Emphasis was placed on tailoring the calendar to each student's individual pace, deadlines, and extracurricular commitments.

Picture 6 illustrates two examples of personal learning calendars.



Picture 6. Examples of two students' personal goals and learning time table

For instance, student M.D. allocated 15–20 minutes each afternoon from Monday to Thursday specifically for reviewing Electrical Measurements content and practising related problem-solving.

Creating checklists. To enhance the organisation and monitoring of practical projects, students were taught how to develop structured checklists. These tools helped ensure that all necessary steps were followed and allowed students to track their progress effectively. **Example checklist for a circuit-building project to measure electric current:**

- *Do I understand the circuit diagram?*
- *Do I have all the required components?*
- *Have I connected the wires correctly?*
- *Have I verified the polarity of each component?*
- *Is the circuit functioning as expected?*

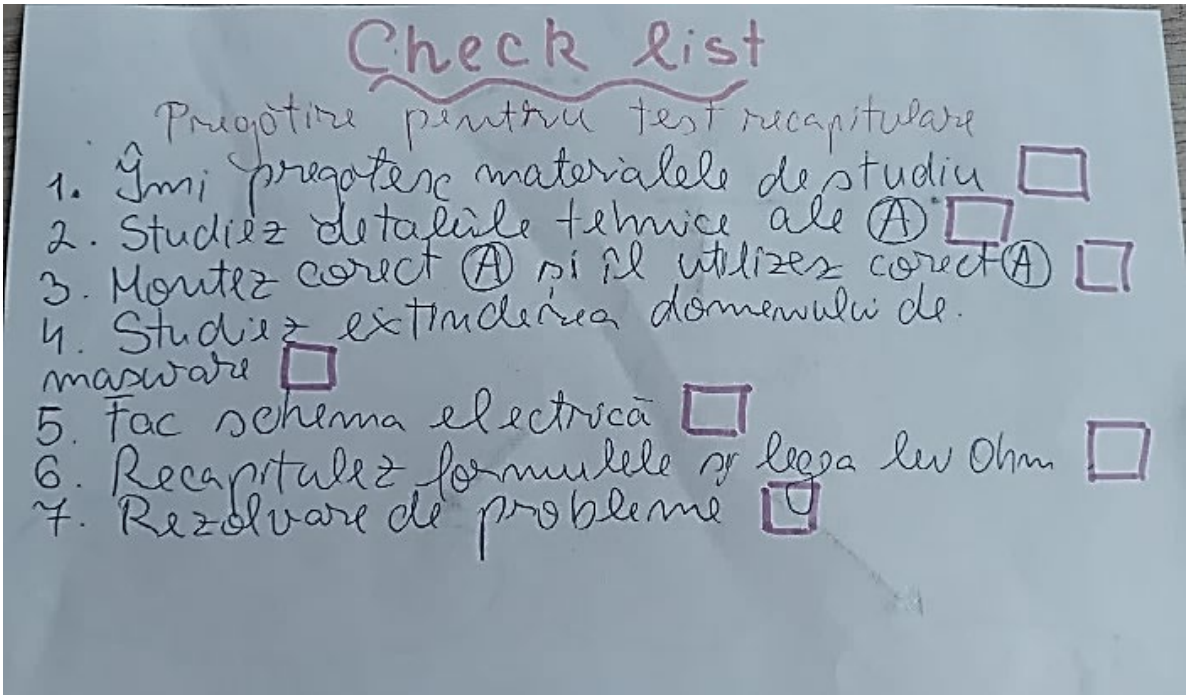
How do my students develop competences: b) how do they gain experience in specific competence development (tasks, activities, etc.)?

Integrating personal goals as a foundation for teaching the learning unit enabled students to establish a clear sense of direction in their knowledge acquisition. This approach helped them grasp

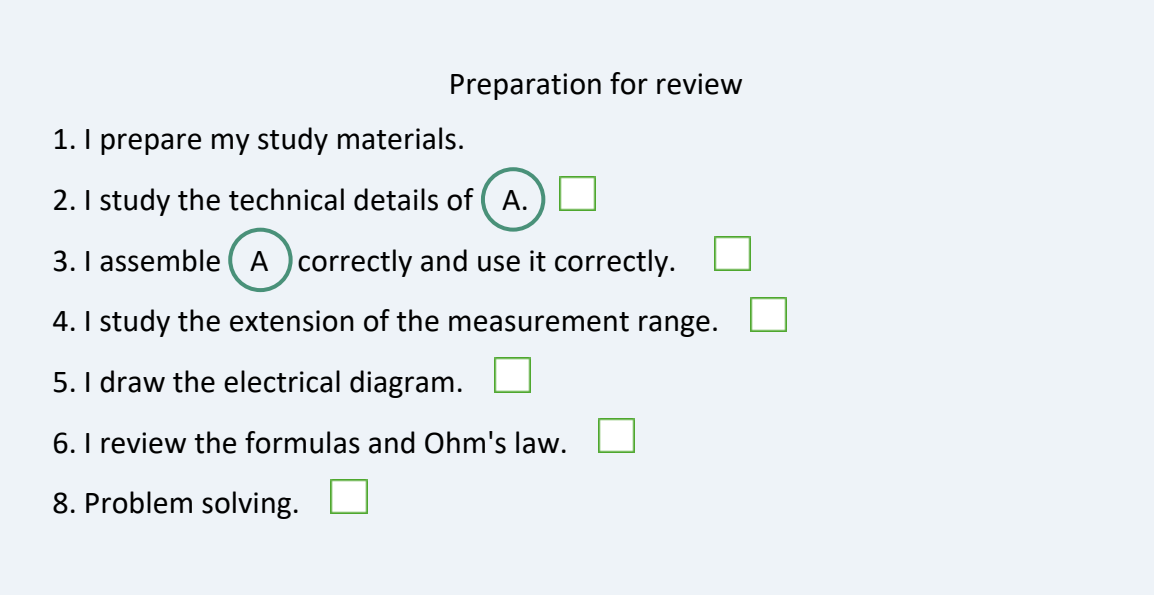
the purpose behind each phase of the learning process. By visualising their objectives and the steps required to reach them, students became more engaged and driven by concrete outcomes.

Introducing personal learning calendars marked a significant advancement in students' ability to manage their time and study efforts effectively. Through structured planning – allocating time for reviewing materials, completing assignments, and preparing for evaluations – students developed a coherent framework for their learning. This strategy not only reduced procrastination but also encouraged a steady and balanced study rhythm.

Checklists proved to be a valuable tool in tackling subject-specific practical projects. By breaking down complex tasks into manageable, sequential steps, students learned to approach problem-solving methodically, ensuring no critical stages were overlooked. Picture 7 and 8 presents a checklist created by a Year 9 student. With regular use, these checklists enhanced students' logical thinking, enabled self-evaluation, and fostered a stronger sense of responsibility for their work.



Picture 7. Example of a checklist created by a student



Picture 8. Translation of the students' checklist

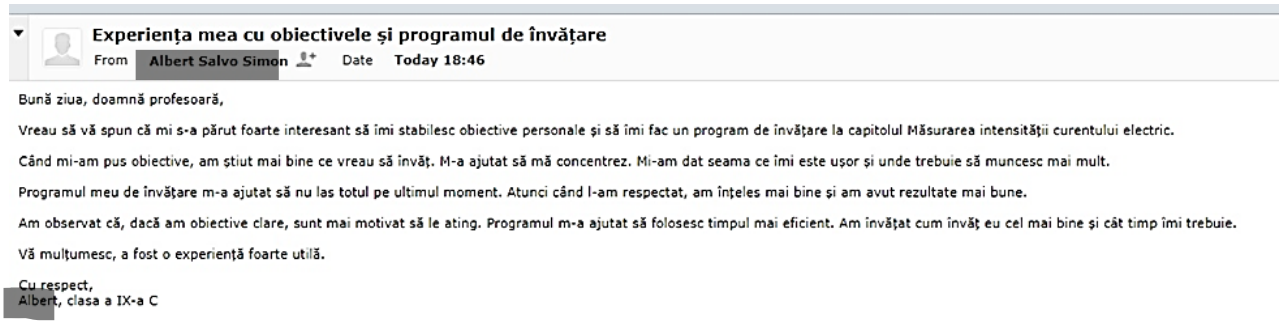
How do my students develop competences: c) how do I support students' growing awareness of their own improvement in the learning process?

Throughout the learning unit, I closely tracked students' progress by reviewing the materials they produced and offering continuous, constructive feedback. Simultaneously, students took an active role in assessing their own work using checklists designed for the practical tasks.

When personal goals weren't fully met, I guided students to reflect on their learning strategies, in line with the COMPASS Model for competence development and assessment. This reflection often led them to adjust their individual learning plans – revising time and effort allocation across different topics as needed. Interestingly, some students extended the use of checklists to theoretical content as well, finding that this approach enhanced their understanding and made their study sessions more efficient.

How do my students and I know that a specific competence has been improved, and at what level?

At the conclusion of the learning unit, students shared their reflections via email, offering insights into the goal-setting process and what they had discovered about themselves. They also evaluated how successfully reaching their personal goals and following their individual learning schedules had impacted their academic performance. Picture 9 and 10 features one such student reflection.



Experiența mea cu obiectivele și programul de învățare

From **Albert Salvo Simon** Date **Today 18:46**

Bună ziua, doamnă profesoară,

Vreau să vă spun că mi s-a părut foarte interesant să îmi stabilesc obiective personale și să îmi fac un program de învățare la capitolul Măsurarea intensității curentului electric.

Când mi-am pus obiective, am știut mai bine ce vreau să învăț. M-a ajutat să mă concentrez. Mi-am dat seama ce îmi este ușor și unde trebuie să muncesc mai mult.

Programul meu de învățare m-a ajutat să nu las totul pe ultimul moment. Atunci când l-am respectat, am înțeles mai bine și am avut rezultate mai bune.

Am observat că, dacă am obiective clare, sunt mai motivat să le ating. Programul m-a ajutat să folosesc timpul mai eficient. Am învățat cum învăț eu cel mai bine și cât timp îmi trebuie.

Vă mulțumesc, a fost o experiență foarte utilă.

Cu respect,
Albert, clasa a IX-a C

Picture 9. Student reflection submitted at the conclusion of the learning unit

Hi Teacher,

I just wanted to say that I really enjoyed setting personal goals and making a learning plan for the unit Measuring Electric Current Intensity. It made a big difference for me. When I wrote down my goals, I had a clearer idea of what I wanted to learn, and it helped me stay focused. I could tell which parts were easy and which ones I needed to work on more.

Having a plan also stopped me from leaving everything until the last minute. When I stuck to it, I understood things better and my results improved. I realized that when I have clear goals, I feel more motivated to reach them. The program also helped me manage my time better, and I figured out how I learn best and how long things take me.

Thanks a lot—it was a really helpful experience.

Best regards,

XXXXXXX

Picture 10. Translation of the student reflection

1.4. Conscious learning in vocational education

Subject area: Electrical Measurements in Direct Current Systems

Students: 9th grade (aged 15-16)

School: Colegiul Tehnic Energetic Cluj-Napoca, Cluj County, Romania

Authors: teacher Melinda Dinu, COMPASS project mentor Anca Petriuc

About the school

Colegiul Tehnic Energetic is a secondary education institution that offers two distinct pathways: a 4-year technical high school program and a 3-year dual vocational training program. Its curriculum is thoughtfully structured to cultivate a broad spectrum of competences. Through both the national core curriculum and locally designed curricula, the school prioritizes discipline-specific skills while also fostering essential general competences that support students' holistic development.

Competency assessment is approached in an integrated manner, taking into account both theoretical knowledge and the practical abilities students gain throughout their educational journey. The school actively engages in initiatives and projects aimed at modernizing teaching methods and aligning education with the evolving demands of the labour market.

A strong focus is placed on each student's personal growth and hands-on training – particularly within the dual education system, where close partnerships with industry stakeholders ensure that students receive relevant preparation and transition smoothly into the workforce.

Structured learning in technical formation

As I reviewed the Year 9 curriculum for *Electrical Measurements in Direct Current Systems* at the start of the school-year, it became clear that while technical competences – like diagramming, result interpretation, and precise terminology – are fundamental, there's a deeper, equally vital skill to nurture: that of learning how to learn.

Defining and describing the competence

I realized that if students gained insight into how they learn, they could become more independent, responsible, and self-confident. To explore this, we began with a brainstorming session where I

invited them to share what "learning to learn" meant to them. The range of responses was both intuitive and surprisingly deep.

We then moved into a more structured conversation, breaking the concept down into observable behaviours. Together, we identified *three key areas*. First, we explored **memory** – how personalized strategies like repetition, mnemonics, and schematisation can enhance retention. Next, we focused on **active learning:** asking clarifying questions, linking new ideas to prior knowledge, rephrasing concepts, and teaching others. Finally, we discussed **learning through mistakes**. I emphasized that errors aren't failures but valuable opportunities. I encouraged them to reflect on what went wrong and refine their approach.

To help them anchor these ideas in familiar territory, we revisited their experiences from the National Evaluation Exam[1]. Since the *DC Electrical Measurements* module builds on math and physics foundations from lower secondary school, this connection offered a relatable entry point into the module's expectations.

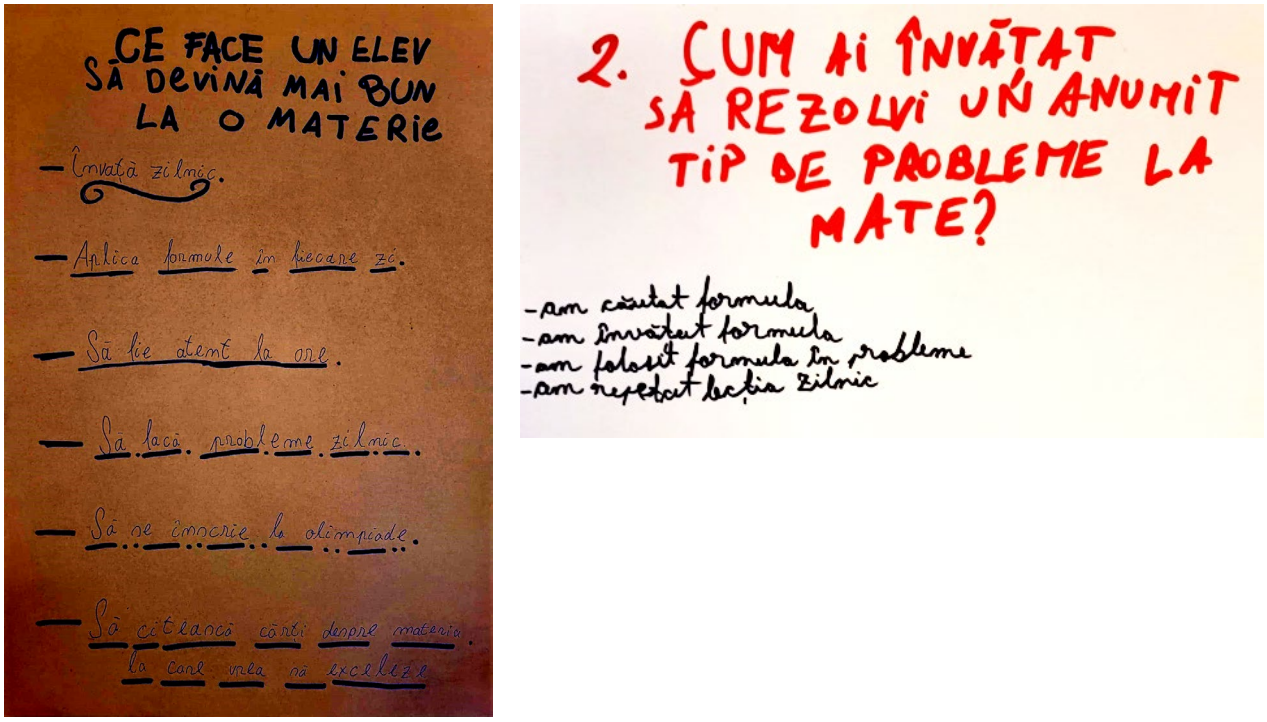
Diagnostic assessment

To initiate the competence assessment, we organized a collaborative group activity. Each team received a thought-provoking question designed to encourage reflection on their own learning process. The questions included:

1. *How did you manage to improve your performance in mathematics?*
2. *How did you learn to solve a specific type of math problem?*
3. *What strategies could help you become better at problem-solving?*
4. *How do you recognize when you've truly learned to solve a problem?*
5. *What actions does a student take to improve in a subject?*

The atmosphere was open and supportive, allowing students to exchange ideas freely, negotiate perspectives, and begin to view their learning as something they could actively shape and manage. A selection of their responses is presented in Picture 11.

[1] The National Evaluation Exam in Romania, taken at the end of 8th grade, is a mandatory standardized assessment that plays a crucial role in determining students' placement into high school.



Picture 11. Diagnostic assessment – responses from two groups

From my perspective as a teacher, the experience was truly eye-opening. I witnessed how, beyond the technicalities of formulas and circuits, a deeper and more meaningful process was unfolding: students were cultivating the ability to learn with purpose, responsibility, and trust in their own capabilities.

Through this activity, students began to recognize the significance of developing key competences that enhance their capacity to learn how to learn, particularly in the context of problem-solving. These competences include engaging in consistent daily learning, adhering to structured study routines, identifying and applying effective problem-solving strategies, and learning from mistakes by analysing and correcting them.

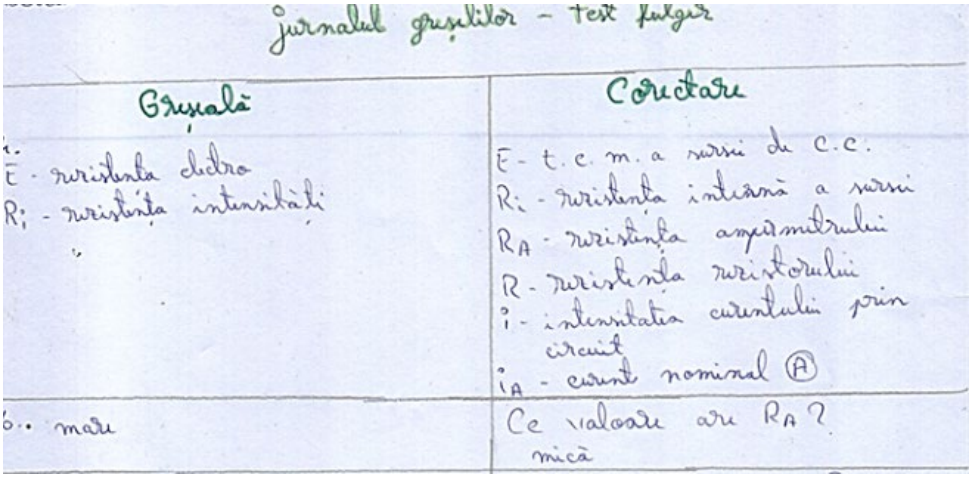
The goals set for nurturing this competence emphasized the importance of critical thinking. Students were encouraged to clearly define problems and deconstruct complex challenges into smaller, more manageable components. Furthermore, by applying their knowledge and skills in unfamiliar contexts, they gained the ability to tackle real-world situations with confidence – transferring theoretical understanding and practical techniques to new problems and adapting familiar strategies to novel scenarios.

Teaching-learning activities and formative assessment

As part of my strategy to foster and evaluate the generic competence of "Thinking and learning to learn“, I introduced a targeted approach centred on enhancing students’ problem-solving abilities. At the heart of this method was the **Mistakes Journal** – a personal notebook that each student consistently completed following every written assessment.

After each test, we conducted a collective review, discussing each question and its correct solution as a class. Following this shared analysis, students worked individually to complete their *Mistakes Journals*. In these entries, they not only recorded the errors they had made but were also guided to reflect on the underlying causes, pinpoint the concepts they had not fully grasped, and – most importantly – write out detailed corrections for each mistake.

This structured reflection was designed to reframe errors not as setbacks, but as powerful learning opportunities. By documenting their wrong steps and corrections, students engaged in metacognitive thinking – examining their own reasoning and identifying gaps in their understanding. The *Mistakes Journal* became more than a record of right answers; it was a tool for reconstructing the problem-solving process, helping students explore why they erred and how they might approach similar challenges differently in the future (Picture 12).



Picture 12. Mistakes Journal

Ultimately, this approach fostered students' ability to monitor their own learning, recognize areas needing further attention, and adapt their study strategies with greater awareness and precision.

Over the course of several weeks, I began to observe a quiet yet powerful shift in how students engaged with their learning. The *Mistakes Journal* had evolved into more than a simple notebook – it became a reflection of their growth. Some students added colour and creativity to their pages, others penned personal reflections, and a few even included questions for me, which sparked meaningful discussions in class.

The nature of their inquiries began to change. Instead of asking for the correct answer, they asked, "*Why did I get this wrong even though I knew the formula?*" or "*How can I better understand what the question is asking?*" It was evident: critical thinking was emerging. Students were beginning to interrogate the process, the logic, and the deeper meaning behind their work.

After one mock exam, we held an open conversation about how mistakes make us feel. It was a moment of genuine honesty. One student shared, "*Before, I felt bad when I made a mistake. Now, I feel like it's something I can learn from*". That was the moment I knew the strategy was truly making an impact.

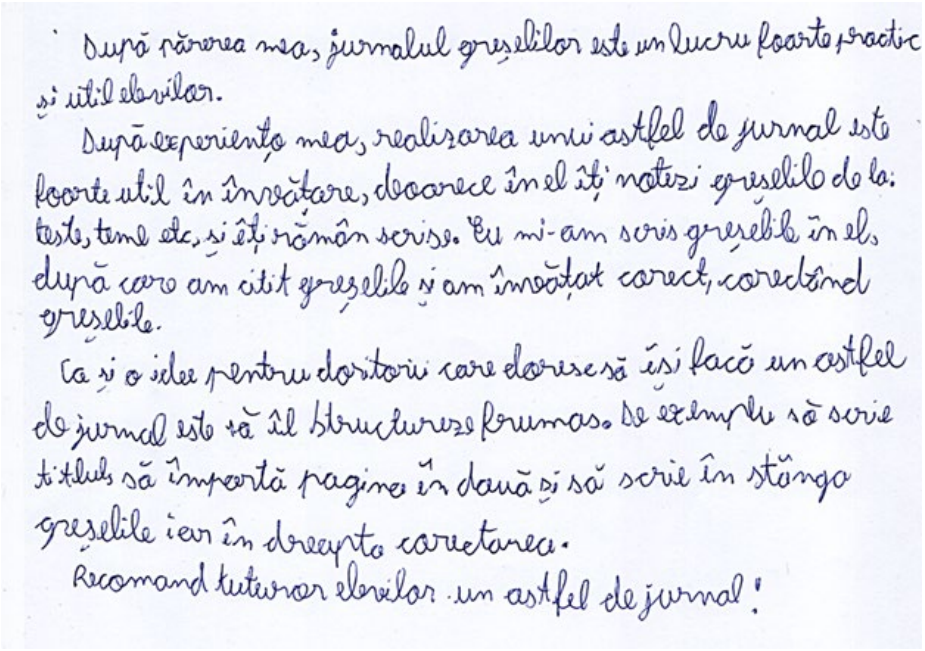
I saw students gradually reshaping their learning habits. Some created more structured study plans, others revised their notes with insights drawn from past errors. Their contributions in class grew more thoughtful, more conceptually grounded, and more courageous.

Without forcing it, the application of knowledge in unfamiliar contexts became a natural part of our routine. I introduced problems that deviated slightly from those they had practiced, and they responded by transferring logic, adjusting strategies, and testing their understanding. Learning began to resemble a strategic game – dynamic, adaptive, and deeply engaging – rather than a mere accumulation of facts.

Reflecting on this journey, I can confidently say that this approach – centred on reflection, embracing mistakes as stepping stones, and nurturing critical thinking – transformed not only how my students learn, but also how I teach. Alongside them, I discovered that true learning isn't defined by grades alone, but by the ability to think clearly, understand deeply, and move forward with confidence.

Summative assessment

The summative assessment took the form of a reflective exercise, in which students were asked to write an essay sharing their personal views on the effectiveness of this tool – see Picture 13 and 14.



După părerea mea, jurnalul greșelilor este un lucru foarte practic și util elevilor.

După experiența mea, realizarea unui astfel de jurnal este foarte util în învățare, deoarece în el îți notezi greșelile de la: teste, teme etc, și îți rămân scrise. Eu mi-am scris greșelile în el, după care am citit greșelile și am învățat corect, corectând greșelile.

Ca și o idee pentru doritorii care doresc să își facă un astfel de jurnal este să îl structureze frumos. De exemplu să scrie titlul să împartă pagina în două și să scrie în stânga greșelile iar în dreapta corectarea.

Recomand tuturor elevilor un astfel de jurnal!

Picture 13. Reflection on the Mistakes Journal

I think the Mistakes Journal is a really useful and practical tool for students.

For me, it helped a lot with learning because I could write down the mistakes I made in tests or homework, and they stayed there so I wouldn't forget. I went back, read what I'd got wrong, and then wrote the correct answers to fix them. That way, I understood things better.

If someone wants to make their own journal, I'd suggest keeping it organized. One idea is to write a title at the top, split the page in two – put the mistakes on one side and the corrections on the other. It makes everything easier to follow.

I definitely recommend this kind of journal to other students – it really helps!

Picture 14. Translation of the student Mistakes Journal

Students started to see mistakes not as signs of failure, but as important clues in their learning journey – showing them where they struggle and where they should focus their energy. Over time, I've noticed that using the *Mistakes Journal* helps students take more ownership of their learning. It makes them more aware of what they need and encourages them to actively look for answers and explanations.

Watching my students grow, I've realized that true learning doesn't just happen when they get things right – it happens most when they refuse to give up. Perseverance has slowly become a key part of learning how to learn. It's not something you can teach directly; it develops through experience, thoughtful reflection, and steady encouragement.

Each mistake they wrote down, each problem they revisited, and every moment of frustration that turned into motivation helped shape a more mature and responsible attitude toward learning. Students began creating their own strategies, tracking their progress, and gradually making fewer repeated errors.

In this setting, the COMPASS Model for developing and assessing generic competences became more than a framework – it became a hands-on way to rethink how learning happens. In the end, what we built together wasn't just the ability to learn, but the belief that learning is a journey worth taking – with patience, reflection, and persistence.

2. Managing and taking care of oneself

2.1. Healthy eating at school

Content area: Environmental studies

Students: 3rd grade (aged 9)

School: Pohjois-Ritaharju School, Oulu, Finland

Author: teacher, COMPASS project mentor Matti Ryhänen

About the school

Pohjois-Ritaharju School is located in Oulu, Finland. It provides education for approximately 480 pupils in grades 1–6 and also hosts two regional groups for pupils requiring intensified support. The school's core values are collaboration, respect for others, and joy of learning.

The school's operational culture is grounded in strong collaboration and collective learning. Staff members work in multi-professional, community-driven teams that follow the principles of a learning organisation. Each team is guided by a team coach, and these coaches also form part of the school's leadership group. The development of staff members' team competences has been systematically strengthened through targeted training for several years.

Introduction

I began the project by highlighting to my students that healthy eating habits provide a strong foundation for learning, vitality, growth, and stamina. I explained how important a healthy school meal is for successful learning, and how a good school day is built on sufficient rest, physical activity, and nutrition. I told the students that in school we can also support the development of these well-being skills.

In this project, I chose to focus on school meals – especially on portion size and the balanced plate model. I emphasized that each student would set their own goals and use self-assessment to track their progress. I designed the project originally for third-grade students, but I kept in mind that it could easily be adapted for any grade level. In my class, the project lasted two weeks, though I noted to the students that the duration could be shorter or longer depending on our needs.

Phase 1: Defining the competence

At the start, I led a whole-class discussion on what self-care and everyday life skills mean and why they benefit us all. I encouraged the students to reflect and share their ideas. Together we organized their thoughts into visible mind maps, which I then posted on the classroom wall so that students could revisit them later when practising the competence.

I prompted the discussion with questions such as:

- What does self-care mean?
- What do everyday life skills mean?
- Why is self-care important?
- What do self-care and school meals have in common?
- What do school meals and learning have in common?

Phase 2: Baseline diagnostic assessment

I asked each student to complete an individual self-assessment form to determine their starting level. On the form, they circled the option that best applied to them, and at the bottom they set a personal goal related to school lunch.

To compare results at the class level, I used the *Mentimeter* app, where I had pre-entered the same statements. After filling in their paper forms, students entered their responses on a computer, phone, or tablet. This way, we could see the class averages without revealing individual responses. I explained why anonymity was important, since eating habits can be a sensitive topic.

At the end of the project, I told the students we would compare these baseline results with their progress (Table 8).

PORTION SIZE	SELECTING FOOD FOR THE PLATE	FOOD EATEN
• My portion is usually too small or too large. • My portion is usually appropriately sized.	• I take only what I like. • I take mostly what I like, but also other items on offer. • I take a balanced variety of everything. I take into account a healthy amount of each item offered.	• I usually do not eat anything. • I usually eat only bread and a drink, but not the hot meal. • I usually eat only what I like most on the plate; the rest is left uneaten. • I usually eat everything, including items I do not like.
I want to improve the following in my school lunch habits:		

Table 8. Baseline diagnostic self-assessment form

Phase 3: Setting goals

After the diagnostic assessment, I guided each student to set a personal goal. I emphasized that the goal needed to be meaningful for them to truly commit. I reminded them that everyone could have different goals depending on which sub-competence they wanted to develop. I handled the process carefully so that no one's personal goal became public.

Phase 4: Guidance for practice

I agreed with the students on a daily moment when we would reflect on their competence development. We chose right after lunch, since the experience was still fresh. I guided them to focus on:

- honesty with themselves;
- open-mindedness;
- perseverance and sustained effort;
- keeping to a regular assessment routine.

Establishing a clear structure is important, as it supports practice. A natural moment is right after lunch, when events are freshest in students' minds. To support them, I made sure to:

- establish a clear structure for post-meal self-assessment;
- organise a mid-point review at the end of the first week;
- protect the privacy of students' goals, and
- inform homes when necessary so that families could support the learning.

Agree on a time during the day when the development of the competence will be assessed.

Phase 5: Practice and formative assessment

I reminded my students that practising this competence could be a natural part of the school day, since everyone in Finland has the right to a daily school meal. Therefore, no special arrangements were needed.

I gave each student their own self-assessment sheet (Table 9), which they completed right after returning from lunch. They recorded numbers according to the instructions, with higher numbers indicating stronger mastery. I printed enough weekly sheets for the entire project.

Each day, I reminded the students of their personal goals and encouraged them to keep working toward them.

WEEK 1	PORTION SIZE	SELECTING FOOD FOR THE PLATE	FOOD EATEN
	• The portion was too small or too large. • The portion was appropriate.	• I took only what I liked. • I took mostly what I like, but also other items on offer. • I took a balanced variety of everything. I took into account a healthy amount of each item.	• I did not eat anything. • I ate only bread and a drink, but not the hot meal. • I ate only what I like most on the plate; the rest was left uneaten. • I ate everything, including items I do not particularly like.
Monday			
Tuesday			
Wednesday			
Thursday			
Friday			

Table 9. Formative assessment form

Phase 6: Summative assessment

At the end of the project, I asked students to complete a summative self-assessment form (Table 10). If the project lasts several weeks, the form can also be completed at the end of each week, serving as an interim review. The form is almost identical to the baseline diagnostic form (Table 8). After completing the paper form, students could also enter their results in *Mentimeter* so that we could anonymously track the class's progress.

PORTION SIZE	SELECTING FOOD FOR THE PLATE	FOOD EATEN
• My portion is usually too small or too large. • My portion is usually appropriately sized.	• I take only what I like. • I take mostly what I like, but also other items on offer. • I take a balanced variety of everything. I take into account a healthy amount of each item offered.	• I usually do not eat anything. • I usually eat only bread and a drink, but not the hot meal. • I usually eat only what I like most on the plate; the rest is left uneaten. • I usually eat everything, including items I do not like.
Compare your results with the goal you set at the beginning of the project. How did you do?		

Table 10. Summative assessment form

After the forms were complete, I held a whole-class review discussion. I wanted to make the different aspects of competence development visible to everyone. Together, we reflected on what students had learned from their goals and how they could continue developing them.

I kept the discussion positive and encouraging, acknowledging that while some students had achieved their goals easily, others were still on their way. I supported the conversation with questions like:

- What can we say about the development of the different sub-competence in our class?
- What was challenging for you, and what was easy?
- What effects have you noticed on well-being, alertness and learning?

Phase 7: Setting a new goal

Finally, I gave my students the option of keeping their current goals or setting new ones to continue their practice. If the classroom climate felt particularly safe and supportive, I sometimes allowed goals to be shared in small groups for stronger peer learning. However, I always exercised sensitivity and good judgment before making students' goals public.

3. Interacting with and relating to others

3.1. Family budget planning and management

Content area: Numeracy & social studies

Students: 3rd grade (aged 9-10)

School: Kaunas Panemunė Pro-Gymnasium, Lithuania

Author: teacher Giedrė Šliumpienė

About the school

The pro-gymnasium is unique in that it implements the International Baccalaureate (IB) program, specifically as a candidate school for the IB Primary Years Program and aspires to become a candidate school for the IB Middle Years Program. The school focuses on the holistic education of children and adolescents, aiming to prepare them to create a more sustainable and peaceful world in the future. Its mission is to create conditions conducive to higher learning achievements and to develop the competences needed to succeed in a changing world, as well as to nurture globally minded people who care about the planet.

At school, we cultivate ten characteristics of a learner (curious explorers, open to the world, thoughtful, caring, knowledgeable, harmonious, sociable, reflective, principled, and willing to take on challenges).

Introduction

I have been working with these students since first grade, and since then, I have been teaching them to take responsibility for their own learning. The students collaborate a lot, and lessons/activities are implemented according to a holistic education philosophy based on the principles of interdisciplinary education. Every week, students set personal learning goals and reflect on their progress at the end of the week/activities. Once or twice a semester, this class has independent learning days where I give the students tasks, and they decide for themselves how and when they'll do them that day.

The students are active, creative, and sociable. They are sufficiently independent, have already acquired time management skills, and try to express their thoughts respectfully. There are two

students with additional educational needs. One student has difficulty concentrating, completing tasks, and participating in activities with the rest of the class. The other student has challenges with managing emotions. Sometimes, student support specialists work with these students individually. I am in constant communication with the parents of these students.

How did my students and I understand and define competence?

We clarified the concepts ("cooperation", "life", "society"), and discussed what we know about cooperation. We are constantly learning to cooperate during lessons and various activities. My students already understand that they are naturally growing up as citizens of their city, country, and the world. Their lives, learning, and communication are more intertwined with the world than ever before. During the learning process, we shape our students' values, cultivate empathy for those who think or look differently, and prepare them to solve problems in their families, communities, and globally (ecological, social, etc.).

What evidence did we, teachers and students, have about the learning situation? Where were we?

Students do not yet fully understand the value of services/goods or the income-expenditure situation in the family. Not everyone can work in a group. Children usually only see the expenditure side, but not the whole complex process of family income and budget planning. Often, children only see the result – that their parents receive money – but do not understand that the salary is received for work performed, that it is neither easy nor constant, and that taxes must be paid. Students rarely see physical money. This makes it even more difficult to understand that everything has to be paid for. I ask students: What does what cost? What services do you pay for and how much? How and why do you need to plan your expenses? Why do you need to save? Talking to students, I realized that they see how food, clothes, toys, and entertainment are purchased. However, they do not see all the hidden costs, such as housing costs, insurance, electricity, or heating bills. They believe their parents spend all their income meeting their needs and wants.

What did I and my students want to achieve? In how much time?

I wanted the students to better understand their parents' lives and get involved in their family's decision-making when planning income and expenses.

I wanted students to:

- understand where money comes from;
- learn how to use money to meet the needs of the whole family;
- distinguish between what we really need (distinguish between wants and needs);
- respect each other and each other's opinions when working in a group.

One month and one week were allocated for the implementation of the activities (one math lesson per week was devoted to income/expense calculations, and another week was devoted to the presentation of the work).

How did I and my students have to prepare?

Students:

- Formed "families", chose professions by drawing lots, agreed on salaries, chose housing, pets, and the names and ages of their children.

Teacher:

- I drew up an action plan.
- I prepared real-life examples (e.g., how families plan their budgets...), prepared questions, and examples of how to solve real-life situations.
- I selected video material and photos from the *Dollar Street* website[1].

How did the students gain experience in developing their competences? (tasks, activities, etc.)

I wanted the students to recreate reality by carrying out activities – to transfer real everyday life to the school/classroom environment. In this safe environment, by playing the simulation game "Family Wallet", the students became familiar with the process of family financial planning.

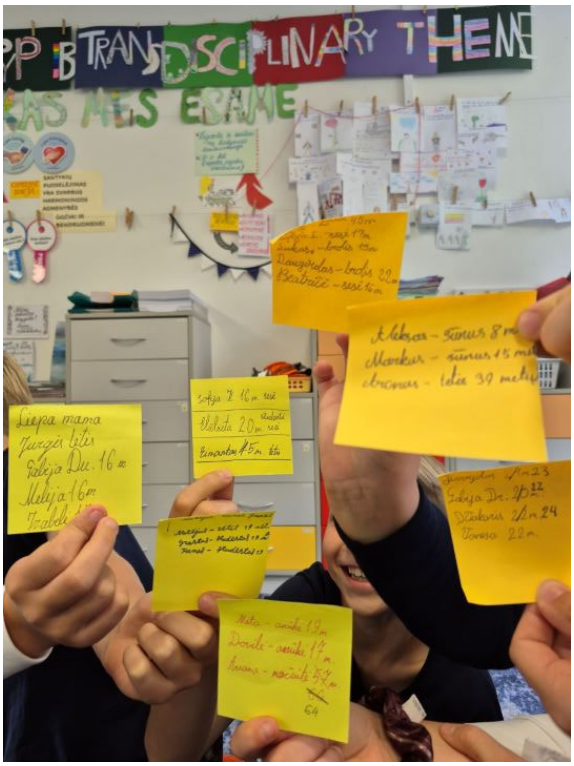
First, I wrote a letter to the parents explaining the essence of the game:

"The children, voluntarily divided into „families"(father, mother, children...), will try to allocate the family budget for a month so that the family does not have to borrow money and can even save some. They will draw lots to choose their professions, find out how much these people earn on average in the country, agree on what kind of housing they will live in (they will need to calculate how much to allocate for taxes), whether they will have a pet, a car, what age their children will be (they will need to allocate expenses for educational institutions and food – so that there is enough room for vegetables, fruit, and everything else). Every day, „the family" will get together and calculate how much money they will need to spend that day (what if someone gets sick? – they will need to visit the pharmacy). After a week, we will all meet and the "families" will present how much they spent, how it went, and where they went (cinema, trip). „The families "will record all this in a notebook or journal. They will also need to monitor prices in stores and brochures. After a month, there will be a discussion and summary of the game. The children are very eager to play. Almost all of the "families" have already been formed. A few are still looking, but I think they will succeed. Now that I have introduced you to the game, I await your approval. Please understand that these are lessons, homework, but of a different kind... "

[1] *Dollar Street*. https://www.gapminder.org/dollar-street

After *receiving the parents' approval, we started the game. The tasks that the children had to* complete were as follows:

1. The students divided themselves into" families" (father, mother, children). They decided on the ages of the children and parents themselves (Picture 15).
2. The students chose their parents' professions (Picture 16) (teacher, librarian, forester, mechanic, travel agent, hairdresser, technologist, doctor, etc.). The students could also come up with their own professions. They could find average salaries for these professions at the *manoalga.lt* website[1].
3. They chose "the home" where they would live. They drew it or found a suitable photo.
4. They drew pictures of their family members.
5. They divided their monthly expenses for food, entertainment, books, medicine, household goods, etc. (Table 11, 12).
6. The "families" agreed on when and how they would "prepare" the daily menu, how they would "go" shopping, and what they would buy. They wrote all this down in a notebook.



Picture 15. Students divide themselves into "families" groups

Picture 16. Students chose parents' professions

[1] *Salaries by positions, Lithuania.* (n.d.) Manoalga.lt. https://www.manoalga.lt/en/salaryinfo

Monthly income of family members	.....+.....+..... euros
Other	..... euros

Table 11. Family income calculation form

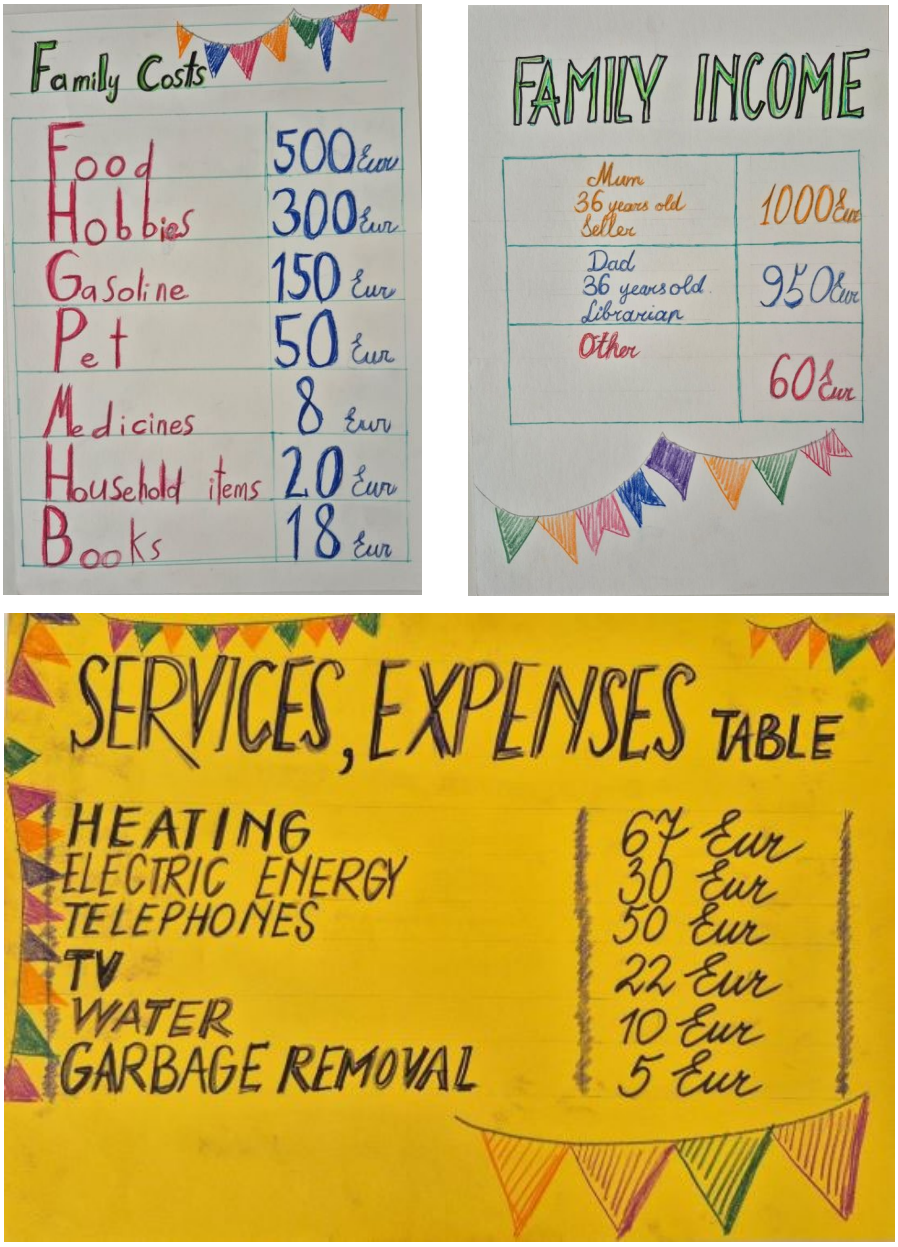
Electricity	..... euros
Heating	
Telephones	
Water	
Gas	
TV	
Garbage collection	
Gasoline	
Other services	

Table 12. Family expenses calculation form

We played this game for about 4–5 weeks. We devoted several math lessons to it, and during breaks, the children would gather to work on it, call each other, and continue in the evening. We used technology and native language lessons to summarize the work. At the beginning, everyone chose their "family" notebook to draw their homes, family members, write down their income, and plan their expenses (they discussed at home and with their parents how much water and electricity cost). Some "families" planned their weekly menu on Mondays, others did it every day. They made shopping lists.

At the end of the game students reflected:

- *"I noticed that oranges are more expensive at grocery MAXIMA these days than at grocery IKI, so I'll buy them at grocery IKI" (Erika).*
- *"We spend quite a lot of money every day, so we all agreed that we would visit friends and family on weekends to spend less" (Patricija).*
- *"I noticed that families with small children are taking them to their grandparents instead of daycare. Probably to spend less..." (Edgaras).*
- *"We didn't even think about diapers... We'll definitely buy some..." (Gabija).*
- *“We will give apples to one family because we have a lot, and maybe we will add some potatoes” (Erika).*



Picture 17. Family income and expenses posters

How did we help students develop self-awareness and competences? How did they know that specific competences were being developed? To what extent and at what level?

Throughout the cycle, I observed the students as they discussed what they would eat, how they would allocate funds, and how they would get involved in the work. I encouraged the "families" to meet and collaborate. I encouraged the children to help their "family" and develop empathy (helping others, sacrificing, caring). The students learned to ask others, accept other people's opinions, agree, and come to a consensus. They developed these competences by seeing how their "family" met their daily needs and managed their affairs. I asked the students: how did you get along in your "family" (what was difficult, what was easy)? How did you entertain yourselves? Did you eat nutritious food? Did you save money, and if so, how much? What was the most memorable

breakfast, lunch, or dinner? How did this game enrich you? Do you think you ate enough protein and vegetables? How did you spend your time? etc.

In carrying out these activities, the competences developed overlapped:

- learning to think (how to "fit" into the budget and still save money);
- self-control (expressing your desires/needs, giving up what is unnecessary).

Most of the children "copied" their family model, asked their parents about the prices of services, heating costs, other housing maintenance fees, and drew up daily/weekly food menus.

How did students learn what competences they improved and to what level?

At the end of the cycle, the "families" presented their work. The students had to prepare and deliver final presentations, which were evaluated by the teacher. At this stage, three real parents of students were in the audience, who listened to the presentations, calculated the costs, and provided feedback to the students.

This simulation game proved to be 100% successful, as the students noted in their reflections:

- We deepened our knowledge of mathematics.
- We began to understand more about why and how to save money, and how to shop.
- We learned to work in a group.
- We learned independence.
- We learned to take responsibility.
- We understood how difficult it is for adults to concentrate on managing money.

My observations as a teacher:

Positive aspects:

- Integration of knowledge. Economic simulation games combine knowledge from various fields and teach students to apply it in an integrated way when solving problems.
- Learning from mistakes and successes – during simulation games, students learn not only from correct decisions, but also from mistakes made.
- Teamwork and leadership – by playing simulation games, children learn to work in a team, share tasks, and take responsibility.
- Problem-solving – while playing games, students constantly encounter various problems that they must solve.
- Activity planning – games limit the time available for decision-making, so to achieve good results, students must learn to allocate their time correctly and effectively, and share tasks.
- Emotion management – time constraints during simulation games often create emotional tension, which students learn to manage by overcoming it.

Challenges:

- Four children (two pairs) did not get properly involved in the game, which made it difficult for those “families”.
- Flu season was an obstacle to the smooth implementation of the plan.

Final remarks

1. It is important to write a letter to parents about this project before starting the activities.
2. Prepare a plan for implementing the project/simulation game, considering your class.
3. Prepare questions in advance.
4. Use different methods of reflection.
5. Work with students to develop evaluation criteria for this work.
6. Invite parents to the final presentations in advance so that they can adjust their schedules.

3.2. Teaching for tomorrow: How to nurture students' competences?

Subject area: Romanian language and literature

Students: 6th grade (aged 12-13)

School: Școala Gimnazială Mihai Viteazul Pucioasa, Dâmbovița County, Romania

Author: teacher, COMPASS project mentor Cristina-Florina Mihai

About the school

Școala Gimnazială Mihai Viteazul Pucioasa is a lower secondary school dedicated to nurturing student development in a vibrant and forward-thinking learning atmosphere. Guided by its core values—professionalism, dedication, and integrity – the school strives to create an environment where both academic and personal growth are prioritized.

While the school has previously engaged with competence-based assessment through national examination standards under the former curriculum, the current national curriculum lacks clearly defined evaluation benchmarks. As a result, assessment practices tend to focus more on content knowledge than on skill development. Despite these systemic challenges, the school remains dedicated to enhancing teaching strategies and exploring more effective ways to nurture and evaluate student competences.

Seeds and seedlings

Imagine competence development as the nurturing of a plant – from seed to seedling to full bloom. Just as plants require fertile soil to grow, generic competences need a rich educational context to flourish. For me, that fertile ground is the subject matter I teach: *Romanian Language and Literature*.

Before engaging my students, I reflected on a key question: how can Romanian Language and Literature support the development of the generic competence of interacting with and relating to others? To explore this, I examined the school curriculum, focusing on how its various components contribute to this essential skill.

Among the five major areas—Oral Communication, Reading, Writing, Elements of Communication Construction, and Elements of Interculturality – I chose to emphasize **Oral Communication**. This decision stemmed from its strong potential to foster interpersonal skills. Oral communication naturally enhances relational abilities through rhetorical elements and communicative behaviour, encouraging adherence to social norms that promote comfort and cohesion both in school and beyond.

The next step was to translate this competence into observable indicators, progressing from knowledge to values and attitudes. I then developed performance standards across three levels—Low (minimum acceptable), Medium, and High. A part of this framework is presented in the table below (Table 13). Specific competence 1.1. is: *based on explicit and implicit information, paraphrase passages from various types of oral narrative texts, monologues, and dialogues*.

SPECIFIC COMPETENCE	STUDENT BEHAVIOUR	BEHAVIOURAL INDICATOR	PERFORMANCE LEVELS		
			Low (Minimum acceptable)	Medium	High
1.1.	The student **listens to** an oral message **or reads** a text excerpt and **renders it in their own words**, changing the text/oral message but **retaining the ideas.**	Renders the message heard/read in their own words, retaining the ideas.	Renders part (about 50%) of the message heard in their own words, but occasionally changes the ideas, omits details, and uses quotations.	Reproduces part (about 75%) of the message heard, omits details, and retains the ideas expressed. Uses quotations.	Reproduces the entire message heard in their own words, without omitting details and retaining all the ideas expressed. Does not use quotations.

Table 13. Fragment of the performance standards framework

In fact, I answered the questions:

- WHAT? – I translated the targeted competence into specific, observable behaviours.
- HOW do I know the student has achieved it? – I defined clear assessment criteria to evaluate their progress.

At the middle school level, the curriculum unfortunately lacks nationally defined assessment standards. Crafting these standards is a highly detailed endeavour, requiring attention to both the quantity and quality of observable student behaviours. For educators, the process of mapping out competence progression and establishing performance benchmarks is essential – it fosters clarity and a shared understanding of the competences they aim to cultivate and evaluate in their students.

Following this, the next critical question arises: *How do I foster the development of this competence?* This involves aligning curriculum content with targeted learning activities and appropriate assessment methods, as partially illustrated in the following table (Table 14). The specific competences (SC) mentioned in the table are:

1.1. Based on explicit and implicit information, paraphrase passages from various types of oral narrative texts, monologues, and dialogues.

1.2. Identify information, communication intentions, emotions, and communicative attitudes in oral texts, monologues, and dialogues.

SPECIFIC COMPETENCE	DESCRIPTION OF THE COMPETENCE OBSERVABLE BEHAVIOUR	ASSOCIATED CONTENT ACCORDING TO THE CURRICULUM	TEACHING STRATEGIES	FORMATIVE ASSESSMENT		
				Low (Minimum acceptable)	Medium	High
1.1. **1.2.**	Render the message heard/read in your own words, retaining the main ideas. Identify information, intentions, emotions, and attitudes in the message heard and retain the essential aspects.	Strategies for understanding oral text: paraphrasing, explicit and implicit information, inferences and implications, relevant/irrele-vant elements.	Role play (working in pairs): each person takes turns presenting their favourite vacation destination. The listener paraphrases the speaker's presenta-tion. Switch roles and repeat the exercise.	Render part (about 50%) of the message heard in your own words, but occasionally modify ideas, omit details, use quotations.	Render part (about 75%) of the message heard, omitting details and retaining the ideas expressed. Use quotations.	Render the entire message heard in their own words, without omitting details and retaining all the ideas expressed. Does not use quotations.

Table 14. Example of alignment between content, learning activities and assessment methods

One of the emerging challenges in Romanian education – and a relatively new approach – is encouraging students to articulate their own understanding of oral communication skills. What do they truly know, or believe they know, about this competence? When students gain clarity about the goals they're working toward and the specific behaviours they need to develop, they begin to take ownership of their learning. This awareness transforms the learning journey into a more personalized and self-directed experience.

The competence was defined/described with the involvement of the students

The description of the oral communication was carried out with active student involvement. To shape their understanding, students were invited to reflect on a series of guiding questions: *What comes to mind when you hear the term "Oral Communication"? What do we communicate? How do we communicate? And why is this type of communication important?* Through this reflective process, students contributed to defining the competence in a way that was meaningful and relevant to their own experiences.

Picture 18. Students activities of defining competences

In response to the question "*What comes to mind when you hear oral communication?*", students offered a range of thoughts. Many described it as an exchange of ideas or emotions between two or more people—whether in discussions, debates, or collaborative problem-solving. Some imagined classroom interactions, such as students talking with teachers or peers, while others emphasized respectful dialogue and the sharing of personal viewpoints.

Summary – keywords: communication partners; exchanged messages (emotions, information, problems); communication attitudes (respect, curiosity, politeness); forms of communication (debates, perspectives).

When asked *"What do we communicate?"*, students identified a wide range of content, from factual information and shared interests to personal emotions and unresolved questions. Their responses reflected both the cognitive and emotional dimensions of communication, highlighting the exchange of ideas, emotions, and solutions to problems.

Key concepts: emotions, information, interests, topics, and problems.

In response to the question *"How do we communicate?"*, students highlighted a variety of verbal and non-verbal methods. They mentioned using words, gestures, facial expressions, and tone of voice, often emphasizing the importance of a respectful and friendly attitude. Their answers

reflected an understanding that communication involves not just what we say, but how we say it – through behaviour, eye contact, and emotional cues.

Key concepts: verbal and non-verbal communication; gestures; tone; facial expressions; respectful and friendly interaction; diverse formats such as debates and presentations.

Why do we communicate? Students shared that communication helps us build relationships, exchange ideas, and collaborate effectively. It allows us to express emotions, understand different viewpoints, resolve conflicts, and cope with stress. In friendships, teamwork, and learning, communication is essential for connection, growth, and problem-solving.

Key concepts: building relationships, sharing ideas, emotional expression, conflict resolution, stress management, learning through interaction.

The definition of *oral communication* established together with the students is summarized as follows: *Oral communication involves people (speakers/listeners) who talk, i.e., interact (convey thoughts, information, ideas, gestures, facial expressions, tone of voice, passions, interests) to solve problems, find solutions, inform us, learn, make friends, ask for help*.

We conducted the initial assessment

To evaluate students' oral communication skills at the outset, we used a Google Forms questionnaire. The questions addressed key dimensions of oral communication, including the act itself, the role of nonverbal and paraverbal cues, the attitudes expressed during interaction, and the personal significance of communication. The questionnaire was designed based on the definition of oral communication skills co-constructed with the students. Its online format allowed both students and the teacher to access individual responses at any time, supporting ongoing reflection and feedback.

We set the learning objectives

The learning objectives were established based on the findings from the initial diagnostic assessment. Each learning unit in the oral communication module is designed to enhance students' communication skills using content aligned with the school curriculum.

In the first unit, the objectives focused on:

- identifying the key elements that shape the communication context: the situation, the participants, the information each person brings, and the placement of a statement within a broader exchange;
- practicing context-aware communication by adjusting speech to suit the circumstances.

These goals were informed by assessment results, which revealed specific areas for improvement:

- 16.7% of students did not consider the status or role of their interlocutor when formulating messages.
- 28% failed to maintain eye contact during conversations.

- Only 17% consistently demonstrated politeness in oral exchanges.
- 50% were only occasionally aware of the speaker's attitudes and intentions.

We designed and carried out teaching, learning, and formative assessment activities

In Unit I ***At home, in the family, among books***, the Oral Communication domain addresses *the Context of communication*. A sample learning activity is presented in the pages that follow.

Evocation

1. Students began by working in pairs to share experiences about situations where they feel comfortable communicating, as well as those where they feel uneasy.

2. Next, they are invited to select from a provided list the scenarios in which they believe they communicate effectively. Examples include:
    - when speaking with familiar people;
    - when meeting strangers;
    - when talking to peers;
    - during conversations in noisy or crowded environments;
    - when feeling tired;
    - when fully understanding the speaker;
    - when unsure about the speaker's references;
    - when actively listening to the speaker.

After the paired discussions, students presented their selected situations to the class. The teacher then summarized the most frequently mentioned responses, highlighting common patterns and insights.

Realization of Meaning

1. Students were asked, through targeted exercises, to analyse the components of the communication context using excerpts from a previously studied text. They first worked individually, then shared their responses with a partner, and presented their conclusions in front of the class. The teacher and peers provided verbal feedback on the accuracy of their answers. For example, based on a selected text fragment, students responded to questions such as:
    - What was the identity of the characters involved in the dialogue?
    - Where did the dialogue take place?
    - What was its purpose? What were Maria's intentions in addressing her mother? Students choose from the following options: she asked for help, tried to convince her of something, requested information, or reproached her.

2. Students were then invited to reflect on how Maria's communication style might have changed if she had been speaking to a teacher instead of her mother. They also considered

how her behaviour would have differed if she had discovered the spider during class rather than at home.

3. Together with the teacher, students identified the elements that shape communication—the context—and discussed how these elements influence the way we express ourselves, emphasizing the importance of adapting communication to suit the situation.

4. In a role-playing activity, students were paired up and randomly assigned scenarios to perform, allowing them to apply their understanding of context-appropriate communication in a practical setting.

The activity included four role-play scenarios:

Pair 1: *One student played the role of a child trying to persuade their parent to get a pet (dog, cat, hamster, or another animal). The parent asked for reasons behind the choice and requested a commitment to caring for the pet. The child was expected to speak respectfully, while the parent showed empathy and thoughtfully considered the pros and cons.*

Pair 2: *Students took on the roles of siblings who wanted to convince their parents to buy a pet. The boy preferred a dog, while the girl wanted a cat. Knowing their parents would only agree to one, each sibling tried to persuade the other that their choice was best for the family.*

Pair 3: *One student acted as a grandson visiting his grandparent. He described the pet he had received, while the grandparent asked about his responsibilities in caring for it. Since the grandparent had difficulty hearing, the grandson used nonverbal and paraverbal cues to ensure clear communication.*

Pair 4: *In this scenario, a child met a neighbour on the street. After exchanging greetings, the child shared their excitement about receiving a pet. The neighbour asked questions about the animal and how it was adjusting to its new home.*

Students negotiated their roles within each scenario and performed the dialogues collaboratively, supporting one another throughout the activity.

5. Formative assessment

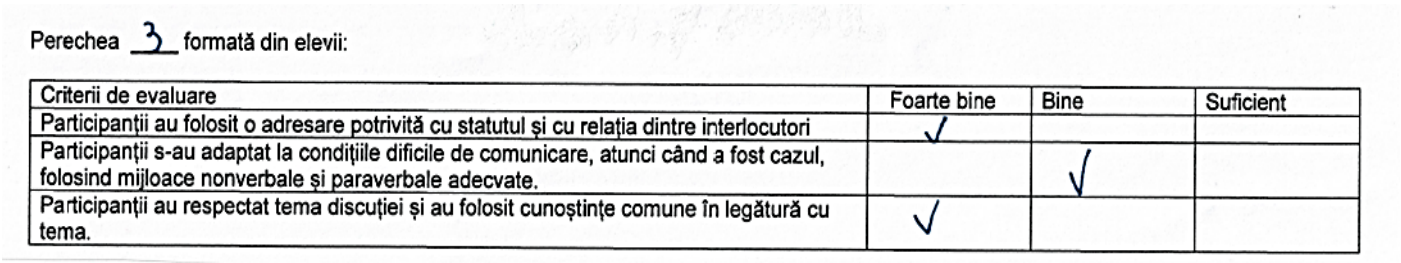
The students performed in front of the class, and both their peers and the teacher evaluated their presentations using the criteria outlined in the evaluation sheet (Table 15).

CRITERIA	LOW LEVEL (minimum acceptable)	AVERAGE LEVEL	HIGH
Participants employ a form of address that suited the status and relationship between the interlocutors.	Participate in discussions (about 50%), present information, and express feelings partially appropriate to	Participate in discussions (about 75%), present information, express emotions and points of view partially	Actively participate in discussions, present information, and express emotions and points of view in a manner appropriate to

	the communication context (employ a form of address appropriate to the relationship between interlocutors).	appropriate to the communication context (employ an address appropriate to the status and relationship between interlocutors).	the communication context (using a form of address appropriate to the status and relationship between the interlocutors).
Participants adapt to difficult communication conditions when necessary, using appropriate nonverbal or paraverbal means.	Participants adapt their communication by using more nonverbal means, sporadically paraverbal elements.	Participants adapt their communication by using nonverbal and paraverbal means partially appropriately.	Participants adapt their communication correctly and appropriately using nonverbal and paraverbal means.
Participants use shared knowledge related to the topic of discussion.	Participants use (approximately 50%) shared knowledge related to the topic of discussion.	Participants use (approximately 75%) shared knowledge related to the topic of discussion.	Participants use shared knowledge related to the topic of discussion correctly and extensively.

Table 15. Presentation evaluation sheet

Students were given a sheet that required only box-ticking, while the evaluation criteria mentioned earlier were projected onto the board using a video projector. Picture 19 illustrates an example of a completed sheet. Once all pairs had performed their role plays and received the assessment sheets, the student assessors explained the reasoning behind the ratings they had assigned.



Perechea 3 formată din elevii:

Criterii de evaluare	Foarte bine	Bine	Suficient
Participanții au folosit o adresare potrivită cu statutul și cu relația dintre interlocutori	✓		
Participanții s-au adaptat la condițiile dificile de comunicare, atunci când a fost cazul, folosind mijloace nonverbale și paraverbale adecvate.		✓	
Participanții au respectat tema discuției și au folosit cunoștințe comune în legătură cu tema.	✓		

Picture 19. Example of a formative assessment sheet filled by student

Reflection

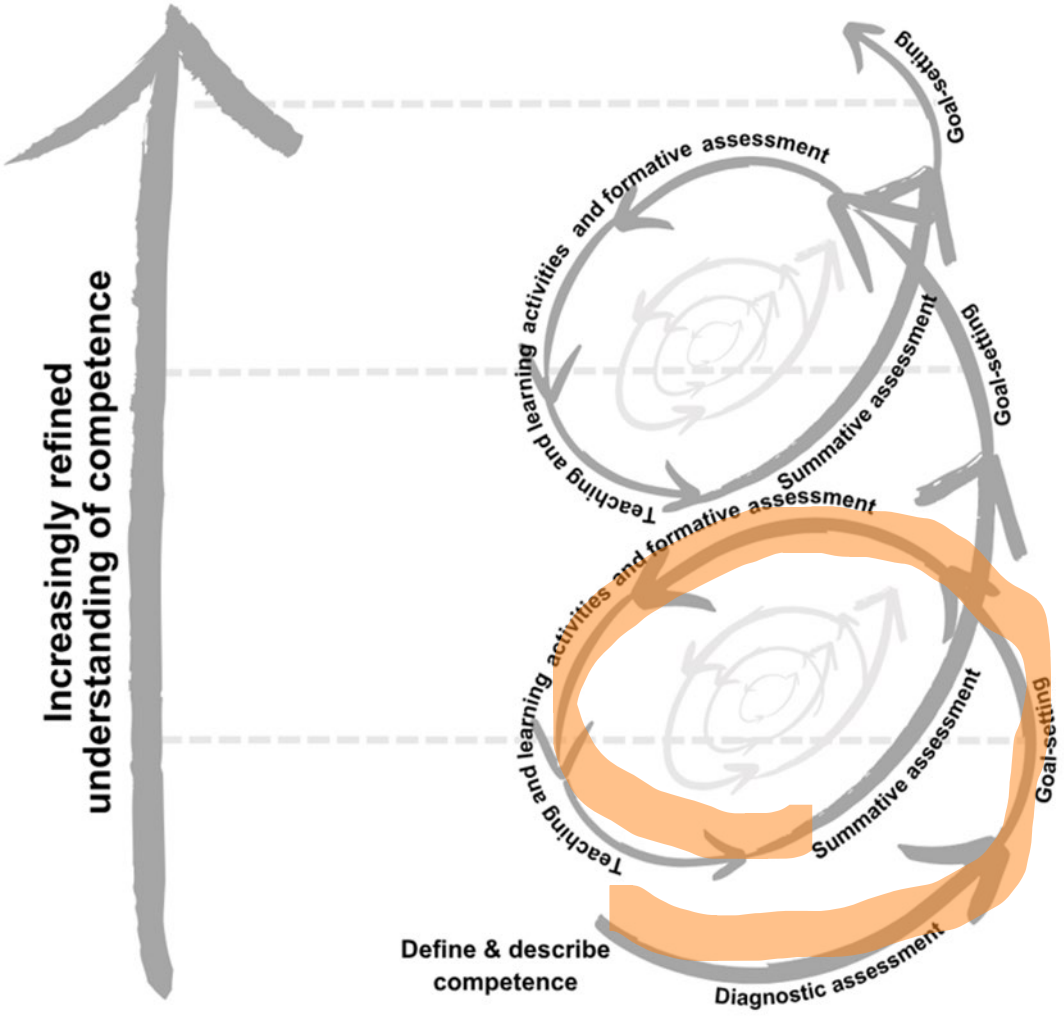
The students were asked to respond to the question: *What did you find most difficult about interacting with others?* They were presented with the following options:

- adapting to the status and expectations of the interlocutor;
- dealing with interference or communication difficulties;
- understanding communication intentions.

Returning to the plant metaphor, the progression of competence was interpreted through observable actions: defining and articulating competence, implementing initial assessments, and

carrying out a learning-assessment phase aimed at cultivating oral communication and, by extension, general competence in interaction and interpersonal relationships.

By completing these stages, we covered half a cycle of the COMPASS Model spiral (Picture 20).



Picture 20. Representation of the stages covered in the COMPASS Model

3.3. Our apple tree

Content area: Technology

Students: 5th grade (aged 10-11)

School: Vilnius Antakalnis Progymnasium, Vilnius, Lithuania

Author: teacher Inga Stanionienė

About the school

Vilnius Antakalnis Progymnasium (primary and lower secondary levels) is a school that promotes openness and harmonious learning, with a focus on creating a safe environment that encourages creativity and curiosity. Education here is based on the principle that every child is unique and valuable. The aim is not only to provide a solid academic foundation, but also to ensure a harmonious and joyful childhood full of discoveries and positive experiences. The school purposefully develops students' entrepreneurship by encouraging them to generate ideas, take initiative, plan responsibly, and implement their ideas through integrated lessons and project activities.

The school is open and accessible to all, consistently implementing inclusive education. The school accepts all children without selection, regardless of their individual needs, social status, or other circumstances, and strives to create conditions for everyone to feel part of the community. By individualizing the educational process, using modern methodologies, and with the help of specialists, we ensure that every student experiences success and grows as a responsible, empathetic, and self-confident person.

Introduction

This is an example **of integrated technology lessons** designed to develop hand embroidery skills and social competence. During the 90-minute lesson "Our Apple Tree", students not only learn practical embroidery stitches, but also actively develop their cooperation competence, positivity, and respect by creating a joint class project.

How did my students and I understand and define competence?

At the beginning of the lesson, we discussed with the students what cooperation, positivity, and respectful communication mean. The criteria for the competency badges were displayed in a visible place in the classroom to serve as a constant reminder and guideline. Competences were defined through specific statements that were understandable to the students:

I COOPERATE:	I AM POSITIVE:	I ALLOW OTHERS TO LEARN:
— I work with any classmate. — I actively participate in group work. — I offer help to others. — I suggest peaceful ways to solve conflicts.	— I thank and praise others. — I share positive things.	— I listen to others without interrupting. — I respond respectfully to different opinions. — When others speak, I remain silent.

What evidence did we, teachers and students, have about the learning situation? Where were we?

No specific diagnostic assessment was carried out before the lesson. It was assumed that the students did not have any hand embroidery skills, so they were taught the basics of stitching. The level of social competence was estimated based on the teacher's general experience of working with the class. The structure of the lesson and the conscious formation of groups allowed for the observation and assessment of competences from the very beginning.

What did we want to achieve? In how much time?

The following goals were set for the 90-minute (double) lesson:

Academic goal: Each student will learn three embroidery stitches (loop, backstitch, machine stitch) and use them to create an individual apple appliqué.

Competence goal: Students will improve their cooperation, positive communication, and respect for one another by working in groups and creating a shared "apple tree" for the class.

How did we prepare?

I prepared a detailed lesson plan (Annex 2) and all the necessary materials: embroidery threads, needles, scissors, fabric scraps, apple templates, stitch samples and instructions, a large wooden model, pins, and task sheets for individual planning (Annex 3).

Prepared and displayed the competency badge criteria in a visible place.

No prior preparation was necessary for the students. All the necessary information and tools were provided during the lesson.

How did students gain experience in developing competences? (tasks, activities, etc.)?

Competences were developed in an integrated manner throughout the lesson, combining practical work with the development of social competence at each stage:

1. **Thinking and learning to learn competence (embroidery skills):**

Learning: Students watched the teacher's demonstration, received stitch samples with instructions, and practiced on pieces of test material.

Planning: Each student planned their work individually – they chose colours and decided which stitches to use for different parts of the apple.

Application: Students embroidered their apple appliqué, applying all three stitches they had learned in practice.

2. **Interacting and relating to others competence (Cooperation, positivity, respect):**

Group work: Students were deliberately divided into different groups so that they could learn to work with any classmate.

Help and teaching: In groups, students who mastered the stitches more quickly helped and taught those who had more difficulty. They were encouraged to seek help within the group first, rather than asking the teacher.

Structured support: Every 10 minutes, a "Help Moment" was announced, actively encouraging students to ask their classmates if they needed help.

Problem solving: A pre-planned "unexpected situation" required groups to discuss the problem together and come up with creative solutions.

Positive feedback: Students were encouraged to praise each other for their efforts and results, and during the final presentation, they had to give positive comments to other groups.

Respectful listening: During the presentations, the rule of listening attentively and quietly to the speakers was emphasized.

How did I help students develop self-awareness and competences? How did they know that specific competences were being developed? To what extent and at what level?

Continuous observation: Throughout the lesson, the teacher observed the students' work, noting specific examples of behaviour that met the competency criteria.

Mutual assistance and assessment: Students assessed their own and their friends' competences when teaching each other how to stitch. "Help moments" served as an informal means of mutual assessment. The task and self-assessment sheets are provided in Annexes 3 and 4.

The Competence Web (Annex 4) is a visual tool for tracking a student's growth in key skills over a six-week period. To begin, the teacher has to instruct the student to use one color to mark their starting abilities on the web. After the learning cycle, they will use a second color on the same sheet to re-evaluate their progress. To create a complete picture, parents are then invited to add their observations using a third color, and the teacher adds their final evaluation with a fourth. The resulting multi-colored web provides a comprehensive view of the student's development from multiple perspectives. Emphasize that this is a collaborative tool for facilitating a constructive conversation about growth, not for a grade.

Visual cues: Competency descriptions displayed in a visible location allowed students to continuously self-assess whether their behavior met expectations.

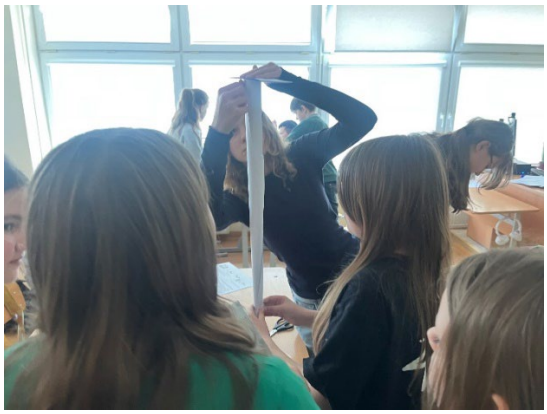
Reflection: At the end of the lesson, a reflection session at the common "apple tree" allowed students to identify what they were proud of and see the importance of their individual contribution to the overall result.

How did students learn what competences they had improved and to what level? (summative assessment).

Academic assessment: Each student's apple was tangible proof of their academic achievement. The works were assessed according to technical execution, use of all three stitches, neatness, and creativity.

Competency assessment: After the lesson, the teacher awarded the students competency badges in the ClassDojo app based on her observations. This provided clear and specific feedback on their demonstration of social skills.

Overall result: The joint "apple tree" became a visual and symbolic assessment of successful collaboration and achieved goals for the whole class.



Picture 21. Lessons activities

Final remarks

This lesson is an excellent example of how collaborative learning can be effectively used for integrated competence development. Clear criteria for social competence, formulated in terms that were understandable to the students, and their consistent application throughout all stages of the lesson allowed the students not only to understand but also to try out the desired behaviour in practice.

Structured elements such as "Helpful Moment", problem situations, and mandatory positive feedback created a safe environment for learning to collaborate. The final summary assessment via ClassDojo badges provides students with clear and motivating feedback on their efforts and achievements in the social domain.

ANNEX 1. Letter to parents about the development and assessment of students' generic competences

Dear Parents,

As you already know, our class has been selected to participate in the prestigious international Erasmus+ project "COMPASS – In support of students' competence" (No. 2023-1-LT01-KA220-SCH-000156521), which aims to develop the expression of essential student competences in the modern world.

Of the many important competences, our class decided to focus on developing civic competence, with a particular emphasis ***on community spirit****. In today's age of individualism, it is more important than ever to develop students' ability to work in a team, understand common goals, and actively contribute to the well-being of the community. Community spirit not only helps students to better integrate into society but also develops such important qualities as empathy, responsibility for common goals, and the ability to listen to and understand others.*

A strong team of seven teachers was assembled to implement the project:

- *Mathematics teacher.*
- *Lithuanian language teacher.*
- *Technology teacher.*
- *Life skills teacher.*
- *German language teacher.*
- *Career specialist.*
- *Deputy Headteacher for Inclusive Education.*

Teachers will participate in training courses to deepen their competences and learn the latest methodologies. The entire team will collaborate in developing lessons designed to foster community-building competences. Competency development will also be integrated into the educational content of lessons, thereby strengthening academic learning.

*Student progress will be monitored and evaluated using **the** innovative **Class Dojo system**. This is a modern platform for promoting positive behavior, where students will receive special badges for demonstrating community spirit:*

- *Helping classmates.*
- *Active participation in group activities.*
- *Initiative in peacefully resolving class problems.*
- *Ability to work in a team.*
- *Respect for others (allowing others to learn, following the rule "when others are speaking, I remain silent").*
- *Empathy and concern for others.*

A career specialist will regularly monitor the progress of the project and conduct individual interviews with students to assess their experiences and progress. Her insights will help us better understand the impact of the project and adjust activities as needed.

We invite you to actively participate in this project:

- *Join the Class Dojo system, where you can see your child's achievements and assessments in real time.*
- *Talk to your children about the importance of community in everyday life.*
- *Share your experiences and insights about the importance of community.*
- *Encourage your children to participate in community activities.*
- *Support their efforts and initiatives.*

The project will continue at least until the end of the school year, and we hope that the skills and values acquired during this time will stay with the students for the rest of their lives.

If you have any questions or suggestions, please feel free to contact us. We believe that through our joint efforts, we will help our children become active and responsible members of the community.

ANNEX 2. Technology lesson "Our apple tree"

LESSON PLAN

Main objectives:

- **Academic objective:** Students will learn three basic hand embroidery stitches (backstitch, running stitch, and machine stitch) and create an embroidered apple appliqué.
- **Competence objective:** To develop cooperation competence, foster positivity and respectful relationships.

Duration: 90 minutes (double lesson).

Required materials:

- embroidery threads in various colours;
- embroidery needles;
- scissors;
- pencils;
- apple template (prepared by the teacher);
- stitch samples and instructions;
- large tree template on cardboard;
- pins or other means of attaching apples to the tree;
- task sheets;
- competence badge criteria (displayed in the classroom).

LESSON ACTIVITIES

1. Introduction: The art of embroidery and cooperation (10 min.)

Present the lesson objectives – both academic (hand embroidery stitches) and social (collaboration).

Show examples of three stitches and briefly explain the technique for making them:

- loop stitch (for the outline and texture of the apple);
- backstitch (for connecting apple details);
- machine stitch (hand-sewn, imitating a machine stitch – for the apple stem).

Show the final goals – everyone will create their own apple, and later all the apples will be put together to form a class "apple tree".

Hang the competence badge criteria in a visible place and remind everyone:

I COOPERATE:	I AM POSITIVE:	I ALLOW OTHERS TO LEARN:
— I work with any classmate. — I actively participate in group work. — I offer help to others. — I suggest peaceful ways to solve conflicts.	— I thank and praise others. — I share positive things.	— I listen to others without interrupting. — I respond respectfully to different opinions. — When others speak, I remain silent.

2. Forming learning groups (5 min.)

Divide the students into groups of 3–4 (consciously form different groups).

Explain that although each student will make their own apple, they will work together in groups, learning stitches and helping each other.

Each group comes up with a name related to apples or trees.

This activity develops the following competences: "I COOPERATE" (I work in a group with any classmate).

3. Learning and planning embroidery (15 min.)

Each student is given a task sheet:

- Apple template for embroidery.
- Stitch examples with brief instructions.
- Individual planning sheet, which must include:

— what stitches to use for different parts of the apple;
— what colours they will choose;
— how you imagine your apple (sketch).

Group members learn together how to stitch on pieces of test material:

- Those who learn the stitch faster show it to the other group members.
- Everyone in the group must try all three stitches.
- The group helps those who are having more difficulty.
- When the group is ready, they show their trial stitches to the teacher.

This activity develops the following skills: "I COOPERATE" (I offer help to others) and "I LET OTHERS LEARN" (I listen to others' opinions without interrupting).

4. Individual apple embroidery (35 min.)

Each student begins embroidering their apple according to an individual plan:

- Transfer the template onto the fabric.
- Cut out the traced apple template.
- Begin embroidering according to your plan, using all three stitches.

During embroidery, students follow the rules of group work:

- If someone is having trouble, they ask their groupmates for help.
- Before asking the teacher, try to solve the problem within the group.
- Praise group members when they manage to make a nice stitch.

The teacher walks around the classroom and observes:

- How students cooperate.
- Whether they offer help to each other.
- Whether they communicate positively.
- How they solve problems.

Every 10 minutes, the teacher announces a "Help Moment" – students stop their work and ask if other group members need help.

This activity develops the following skills: "I COOPERATE" (I offer help to others), "I AM POSITIVE" (I thank and praise others), and "I LET OTHERS LEARN" (I respond respectfully to different opinions).

5. Problem solving (7 min.)

The teacher announces an unexpected situation to all students (the problem sheet is provided below). In groups, students have 3 minutes to discuss the situation and come up with solutions for their group members.

Each group briefly presents its solutions (30 seconds each).

The other students listen attentively without interrupting.

This activity develops the following skills: "I COOPERATE" (I suggest peaceful ways of resolving conflicts), "I LET OTHERS LEARN" (I listen to others' opinions without interrupting).

6. Apple presentation and tree creation (15 min.)

Each group goes to the front of the class and presents its members and the apples they have created:

- They indicate how the final result differs from the initial idea/plan.
- Share what they learned while sewing.
- They present how they developed their skills.

After the presentation, the group members attach their apples to the large tree in the classroom. After each presentation, the other students say at least one positive comment (about the group or individual work).

This activity develops the following skills: "I AM POSITIVE" (I thank and praise others) and "I LET OTHERS LEARN" (I remain silent when others are speaking).

7. Review and reflection on the apple tree (3 min.)

All students gather around the apple tree they have created.

The teacher asks:

- How do you feel seeing all your work on one tree?
- What does this joint work symbolize?
- How did working together in groups help you create your individual apples?

Each student takes turns saying one thing they are proud of in this lesson (in their work or collaboration).

This activity develops the following skills: "I AM POSITIVE" (sharing positive things) and "I LET OTHERS LEARN" (listening without interrupting).

ASSESSMENT

Academic assessment:

- Technical execution of strokes.
- Use of all three stitches.
- Neatness of the finished work.
- Creativity.

Competency assessment: Observe students throughout the lesson, paying attention to:

- How they collaborate in groups.
- Whether they offer help to others.
- Whether they communicate positively, praise, and thank others.
- Whether they listen to others without interrupting.
- Whether they respond respectfully to different opinions.
- How they present their work and point out differences from the original idea.

After the lesson, fill out the badge award form based on the observation results in the Class Dojo app.

DESCRIPTIONS OF EMBROIDERY STITCHES

1. Loop stitch:

- The thread is pulled up.
- The needle is inserted near the first stitch and pulled out, forming a loop.

- The thread is moved under the tip of the needle.
- Pull gently to form a loop.
- Suitable for creating contours and textures.

2. Backstitch:
   - A simple stitch where the needle is inserted into the fabric several times at equal distances and pulled out.
   - Stitches can be of varying lengths.
   - Suitable for joining details and marking contours.

3. Machine stitch (by hand):
   - The needle is inserted and withdrawn at a short distance, sewing in a straight line.
   - The stitch is made from top to bottom and back to the top.
   - Stitches are of equal length, forming a continuous line.
   - Imitates a sewing machine stitch.
   - Suitable for straight and even lines.

PROBLEM SHEET

PROBLEM #1: END OF THREAD

Martynas in your group has run out of red thread, which he is using to embroider the inside of the apple. He has already finished half of the work, and there is no more thread of the same colour left in the classroom. Kotryna suggests starting over with a different colour, Lukas thinks they should ask the teacher for help, and Ugnė suggests creating a "two-colour" apple.

GROUP TASK:

- Discuss all possible solutions.
- Come up with at least TWO additional solutions.
- Decide which solution is best and why.
- How could this solution make Martynas' apple even more interesting?

PROBLEM #2: DIFFERENT PACE

In your group, Gabija has almost finished embroidering her apple, while Matas has only just started and is very worried that he won't finish in time. Gabija wants to finish her work and add extra details, while Matas feels discouraged by his slow pace.

GROUP TASK:

- How can you help Matas keep up, but also allow Gabija to improve her work?
- Come up with at least THREE ways the group could work so that everyone feels good.
- How could you divide the tasks so that everyone can finish on time?
- How would you encourage Matas to feel better about his pace?

PROBLEM #3: THE STITCH IS NOT WORKING

In your group, Austėja can't seem to get the loop stitch right—her loops are uneven, and some of them come undone. She starts to get angry with herself and says that her apple will be the ugliest in the class. The other group members are also unsure about how to do this stitch correctly.

GROUP TASK:

- How can you help Austėja learn the loop stitch?
- Who could ask the teacher or other students who are good at it for help?
- Think of ways you could all practice together to improve your skills.
- How could you encourage Austėja and help her feel more confident?

PROBLEM #4: GROUP DISAGREEMENT

Your group cannot agree on how to arrange the apples on the shared tree. Marija wants all of the group's apples to be together on one branch. Dominykas thinks they should be arranged by colour ( ). Emilija suggests that everyone should put them wherever they want. And Noah hasn't finished his apple yet and is worried that there won't be a good place left for it.

GROUP TASK:

- Discuss the advantages and disadvantages of all the suggestions.
- Think of a way to combine these ideas into one solution.
- How will you ensure that Noah's apple also finds a good spot?
- Develop a plan for how you will make the final decision so that everyone feels heard.

PROBLEM #5: PRICKED FINGER

While sewing, Kamilė accidentally pricked her finger with a needle. It hurts, there is blood on her fingers, and her fingers are dirty. She is afraid that she will stain her apple and cannot continue working.

GROUP TASK:

- What should Kamilė do first?
- How can the group help her?
- How can the apple be protected from getting dirty?
- How can we help Kamilė continue her work safely?
- What safe sewing principles could help prevent such situations in the future?

PROBLEM #6: UNEXPECTED DESIGN CHANGE

Andrius drew a green apple on his planning sheet, but when he started embroidering, he had the idea to make a fantastic multi-coloured apple. He has already started to change the design, but now he is unsure whether the teacher will allow him to deviate so much from the original plan. Other group members have different opinions.

GROUP TASK:

- Should Andrius stick to the original plan or try out the new idea?
- How could he combine the original idea with the new one?
- How could the group help him make a decision?
- How should this change be presented to the teacher?

Group name: _____

Group members:

_____

_____

_____

_____

_____

I. PLANNING

Our apple plan. Draw a picture – what your group's apples will look like (a brief sketch):

II. PLANNING AND EVALUATION OF STITCHES

Fill in the table:

STITCH	WHERE WE WILL USE IT IN THE APPLE	THREAD COLOR	HOW IS THE STITCH GOING?
Loop stitch			☐ Excellent ☐ Average ☐ Still learning
Sewing stitch			☐ Excellent ☐ Average ☐ Still learning
Machine stitch			☐ Excellent ☐ Average ☐ Still learning

III. GROUP SELF-ASSESSMENT

Discuss in the group and evaluate together how you did:

I COOPERATE: cooperation

CRITERION	EXCELLENT ★★★	GOOD ★★	STILL NEEDS IMPROVEMENT ★
We worked in a group/pair with any classmate			
We offered, requested, and provided assistance to others			
We suggested peaceful ways to resolve conflicts			
We actively participated in group work and contributed our ideas			

I AM POSITIVE: positiveness

CRITERION	EXCELLENT ★★★	GOOD ★★	STILL NEEDS IMPROVEMENT ★
We thanked and praised others			
We noticed and found an opportunity to share positive things			
We praised in front of everyone and expressed criticism individually			
We understood and respected other people's boundaries			

I ALLOW OTHERS TO LEARN: allowing

CRITERION	EXCELLENT ★★★	GOOD ★★	STILL NEEDS IMPROVEMENT ★
We listened to others' opinions without interrupting			
When others spoke, we remained silent			
We responded respectfully to different opinions			
We found an appropriate way to calm down that did not disturb others			

IV. INDIVIDUAL SELF-ASSESSMENT

Each group member evaluates their own contribution:

Name: _____

How did you do learning embroidery stitches? (select one)

☐ I learned all three stitches easily.

☐ I learned, but I needed help from my friends.

☐ I still need to practice.

How does the apple I created differ from the original idea?

How did I help other group members?

What would I do differently next time?

V. TEACHER'S NOTES

Reminder of stitches:

Loop stitch:

- Pull the thread upward.
- The needle is inserted close to the first stitch and pulled out, forming a loop.
- The thread is moved under the tip of the needle.
- Pull gently to form a loop.

Basting stitch:

- The needle is inserted into the fabric several times at equal distances and pulled out.
- The stitches can be of varying lengths.

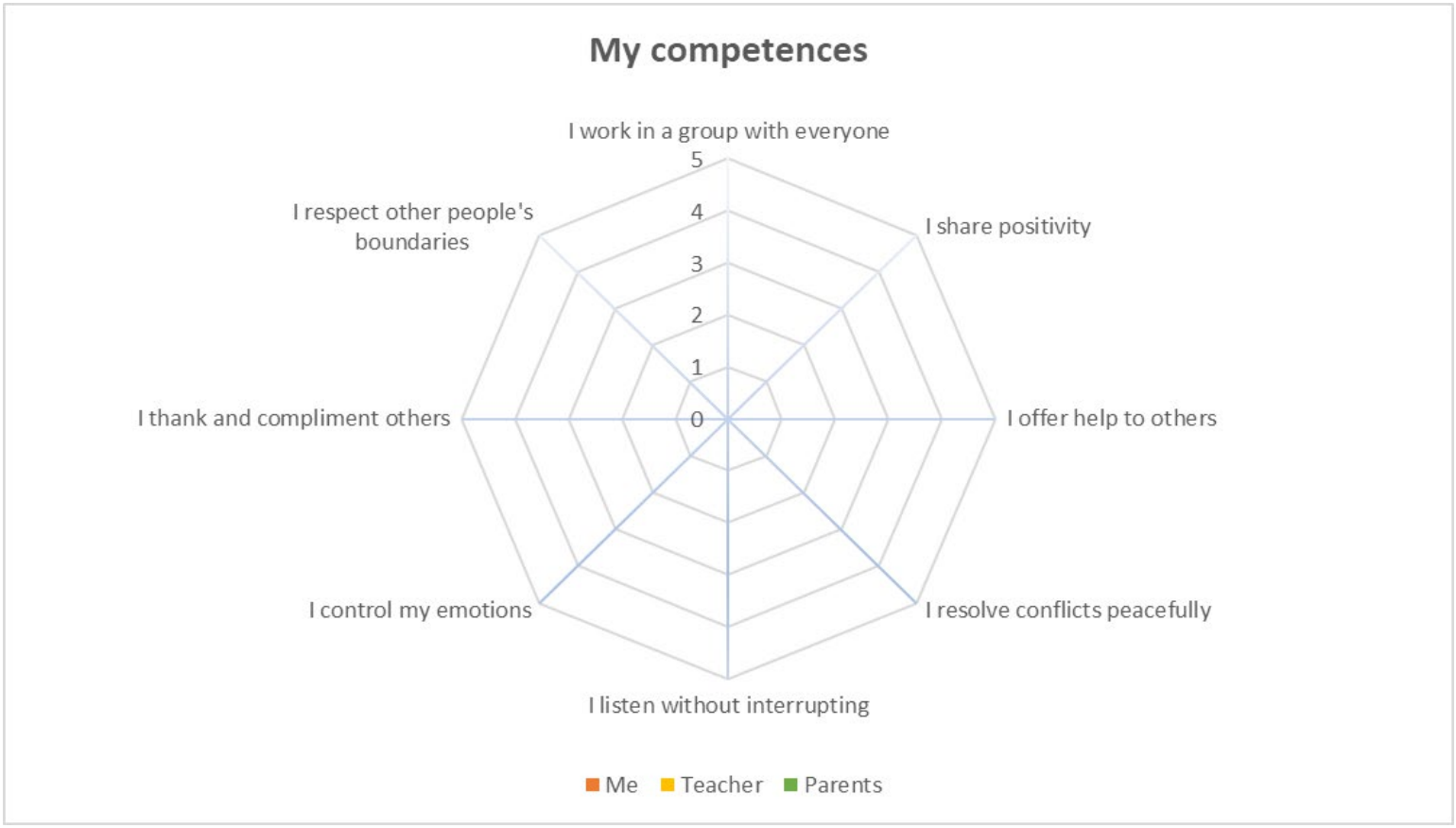
Machine stitch:

- The needle is inserted and pulled out at a short distance, sewing in a straight line.
- The stitch is made from top to bottom and back to the top.
- The stitches are of equal length, forming a continuous line.

ANNEX 4. Competence self-assessment sheet

Last name: _____

First name: _____



3.4. Climate change

Content area: Geography

Students: 2nd Gymnasium class (aged 15 to 17)

School: Prienai District Stakliškės Gymnasium, Lithuania

Author: teacher Danguolė Bartkienė

About the school

Stakliškės Gymnasium is located on the outskirts of Prienai District. The school has 155 students and 28 teachers. A large proportion of the students come from disadvantaged socio-economic backgrounds (90 children receive free meals, and a large percentage of students live in single-parent families), so the school focuses on the cultural development of its students and tries to involve them in informal artistic and sports education.

Competences at the school are assessed by collecting evidence from students. Each student has his/her own folder in which they collect examples of their best work, certificates, diplomas, and other information proving their competences. In this way, students build up their portfolios over several years, they can monitor their progress, and more easily identify their strengths and areas for improvement. The Compass Model has complemented the existing competency assessment system, helping students to better understand the concept of competences and recognize them in their activities.

How did my students and I understand and define competence?

Communication competence is defined in the Lithuanian general curriculum as the ability to create, convey, and understand information and ideas using various forms of verbal and nonverbal expression, using communication tools and technologies ethically and responsibly. During discussions with students in class, we sought to understand what this competence means to them. Students defined it as the ability to express thoughts clearly, listen to others, participate in discussions, justify their opinions with arguments, and respond constructively to others' statements. They emphasized that it is important not only to speak, but also to know how to listen—this helps to create mutual understanding.

Taking into account the students' insights and needs, I decided to focus more on improving their ability to participate in discussions: learning to ask questions, respond to different opinions, and follow the structure and etiquette of a debate. The following discussion criteria were developed:

- Clear expression of thoughts.
- Supporting views with facts and data.
- Use of geographical terms.
- Listening to the opinions of others.
- Responding to others' statements (asking questions, adding to them).

What evidence did we, teachers and students, have about the learning situation? Where were we?

Observation of previous discussions in class and student reflections revealed that some students avoid actively expressing their opinions. It was also noted that quite a few students are unable to express their opinions in a reasoned manner and justify their position. These observations show that students' communication competence, especially during discussions, are not yet fully developed.

This situation prompted me to pay more attention to improving skills related to active participation in discussions and argumentation. Such observations and reflections help me to better understand in which areas additional help is needed and what goals are important to set for the further education process.

What did we want to achieve? In how much time?

Taking into account the students' initial abilities and observations, I decided to strengthen their communication competence, especially their ability to discuss, express their thoughts clearly, and justify their opinions with geographical content.

I planned to achieve these goals in 5 lessons (one lesson per week). I was using the "Fishbowl" method to achieve these goals. The aim for each student was to gain confidence in their thoughts, be able to express them clearly, and justify them using geographical facts and analysis.

How did I and my students have to prepare?

I was using the Fishbowl method during the lesson cycle, so teachers who want to use this example in their lessons need to familiarize themselves with the method itself. Fishbowl is a form of discussion in which a small group of students (or participants) discuss a specific topic in a small circle with an empty chair in the middle, while the rest observe from the surrounding "fishbowl" area. Observers can join the discussion by sitting in the empty chair in the middle whenever they want or when the discussion reaches a certain stage. This method encourages active listening, critical thinking, and engagement in the discussion for both participants and observers.

In order to participate successfully in the discussions, we worked with the students to prepare key questions that encouraged deeper exploration of the topic and the formation of arguments. We

also learned the rules of discussion—how to respect others' opinions, listen to our conversation partners, and express our thoughts constructively.

An important part was discussing the principles of polite communication: we learned how to maintain a respectful and friendly tone, how to avoid conflicts, and how to ensure that the discussion was engaging and productive for all participants.

How did the students gain experience in developing their competence? (tasks, activities, etc.)?

At the beginning of each lesson, I introduced the students to new information related to climate change. The students were listening to my explanation, searching for information themselves, and answering test questions. In the second half of the lesson, the students participated in an "open aquarium" discussion. For example, the topic of the lesson was the effects of climate change. At the beginning of the lesson, students were introduced to the theoretical material, and in the second half of the lesson, a randomly formed inner circle discussed the topic "How climate change affects people's lives." The outer circle observes and analyses. A chair is left empty in the inner circle so that the observing students can join the discussion and express their reasoned opinions.

Picture 22. Students discussion

How did I help students develop self-awareness and competences? How did they know that specific competences were being developed? To what extent and at what level?

During and after the discussion, we used observation sheets (Annex 1), which helped both the teacher and the students to carefully observe and analyse the discussion process. Students assessed their own abilities by answering questions about whether they clearly expressed their thoughts,

listened to others, and based their arguments on facts and reasoning. This self-assessment promotes awareness and allows students to identify their strengths and areas for improvement.

After the discussion, students filled out self-reflection sheets (Annex 2), in which they assessed their abilities and progress according to pre-defined criteria. This activity encourages students to consciously reflect on what they already know, what still needs to be improved, and how their competences are developing.

How did students learn what competences they improved and to what level?

At the end of the lesson cycle, students received a detailed assessment covering their ability to express their thoughts clearly, argue their opinions, listen to others, and participate in constructive discussions (Annex 3). The assessment was based on an analysis of students' self-reflection, observation sheet entries, and teacher comments.

The assessment was presented in the following form:

- Individual reflection, in which the student described how they have improved their ability to participate in discussions and what argumentation and listening skills they have learned to apply.
- Feedback from the teacher, highlighting the student's strengths, such as the ability to express thoughts clearly or to use facts well, and pointing out areas for improvement, such as listening or respectful behaviour in discussions.

Final remarks

After the lessons, I understood that five lessons were too short a period to achieve the goals, so the development of this competence was continued during other topics.

ANNEX 1. Observation sheet

Name of student being observed: _____

ASSESSMENT ASPECT	YES/NO	COMMENT/EXAMPLE
Clearly expresses thoughts		
Supports their opinion with facts or data		
Uses geographical terms		
Listens to others' opinions without interrupting		
Responds to others' comments (asks questions, adds to the discussion)		

ANNEX 2. Reflection after the discussion

Student: _____

Date: _____

How did you manage to express your opinion in this discussion?

Were you able to back up your thoughts with geography knowledge or data?

How did you manage to listen to others and participate in the discussion?

What would you do differently next time?

Which of your communication skills would you like to further improve?

ANNEX 3. Self-reflection sheet

After the presentation in class, please reflect on your preparation, the presentation itself, and your communication competence. Answer these questions honestly. This will help you improve in the future.

1. Describe your preparation for this task. Did you manage to prepare on time?
2. What do you think about your ability to convey information clearly during the presentation?
3. Were the visual aids (maps, graphs, pictures) you used effective? Why?
4. How did you manage to answer the questions of your classmates or teacher?
5. What new things did you learn about the geographical phenomenon you chose?
6. What communication skills do you think you have improved?
7. Evaluate yourself according to the following criteria (mark with an X):

Student: _____ Date: _____

ABILITY	POOR	SATISFACTORY	GOOD	EXCELLENT
Clearly convey information				
Use appropriate visual aids				
Base information on facts				
Answer questions				
Speak clearly and coherently				

3.5. Interaction, empathy and collaboration in technical projects

Subject area: Special electrical installations

Students: 11th grade (aged 17–18)

School: Colegiul Tehnic Energetic Cluj-Napoca, Cluj County, Romania

Author: teacher, COMPASS project mentor Anca Petriuc

About the school

Colegiul Tehnic Energetic is a secondary education institution that offers two distinct pathways: a 4-year technical high school program and a 3-year dual vocational training program. Its curriculum is thoughtfully structured to cultivate a broad spectrum of competences. Through both the national core curriculum and locally designed curricula, the school prioritizes discipline-specific competences while also fostering essential general competences that support students' holistic development.

Competence assessment is approached in an integrated manner, taking into account both theoretical knowledge and the practical abilities students gain throughout their educational journey. The school actively engages in initiatives and projects aimed at modernizing teaching methods and aligning education with the evolving demands of the labour market.

A strong focus is placed on each student's personal growth and hands-on training – particularly within the dual education system, where close partnerships with industry stakeholders ensure that students receive relevant preparation and transition smoothly into the workforce.

Tech meets teamwork

Within the 11th grade curriculum for the electrical field, under the professional qualification "Electrical Installation Technician", *Module II "Special Electrical Installations"* places strong emphasis on developing interpersonal and collaborative skills. These abilities are essential for engaging in diverse learning and assessment activities, particularly in group projects where students take on defined roles related to the technical content.

Communication plays a key role in this module, supporting the presentation of project outcomes, the discussion of technical subjects, and the drafting of standardized technical reports. Cultivating

these skills involves exploring concepts such as effective communication, empathy, relationship-building, and conflict resolution. This foundation enables students to form meaningful connections, think creatively and critically, and demonstrate flexibility.

Through this process, learners develop attitudes rooted in respect, trust, and tolerance – reinforcing core values like responsibility, equality, and compassion. To support this goal, we created a learning unit titled *"Special Electrical Installations Using Innovative Technologies"*, which integrates technical expertise with the development of interpersonal and relational skills.

The unit overview

1. Competences

Technical Proficiencies:

- Recognize and describe the components of specialized electrical installations.
- Program and control installations using Micro-bit devices.
- Perform safe and accurate electrical connections.
- Diagnose and resolve operational issues in electrical systems.

Interpersonal & Collaborative Skills:

- Collaborate effectively within a team to complete a project.
- Communicate ideas and solutions clearly and constructively.
- Practice active listening and show respect for diverse viewpoints.
- Navigate conflicts through negotiation and mutual understanding.
- Deliver engaging presentations of project outcomes to an audience.

2. Core Content Areas

- Introduction to Micro-bit: hardware components, functionality, and programming interface.
- Fundamentals of Micro-bit programming: working with code blocks, variables, and functions.
- Sensors and servomotors: classifications, operating mechanisms, and integration with Micro-bit.
- Specialized electrical systems: smart lighting, alarm systems, and intelligent signalling setups.
- Electrical schematics and wiring techniques.
- Designing and building a customized electrical installation using Micro-bit technology.

3. Learning Activities

- Hands-on exercises to explore Micro-bit and its programming environment.
- Mini-projects involving sensors, servomotors, and auxiliary components to grasp core principles.
- Analysis of real-world examples of specialized electrical installations.
- Collaborative design and execution of a unique electrical installation project.
- Class presentations featuring live demonstrations of completed projects.

4. Assessment Methods

Formative assessment:

- Continuous observation during practical tasks using a *social skills rubric* (teamwork, communication, problem-solving).
- Ongoing feedback to support student progress.
- Opportunities for self-reflection and peer-to-peer evaluation.

Summative assessment:

- Final project assessment based on functionality, complexity, and presentation quality (guided by a detailed rubric).
- Evaluation of communication and collaboration skills through observed interactions and project presentations.

We fostered interaction and relationship skills by organizing students into teams with clearly defined roles and responsibilities. We established collaborative norms that emphasized respect and cooperation, encouraged students to take initiative and support one another, and facilitated feedback sessions where they could share constructive input.

Define & describe competence

Engaging students in the process of **defining and exploring this competence** proved to be highly beneficial. It helped them reflect on their own interpersonal abilities and recognize the value of building meaningful connections. I invited them to identify traits and behaviours that characterize someone skilled in interaction and collaboration. Their responses included active *listening, empathy, mutual respect, clear and assertive communication,* and *effective teamwork*.

Through this reflective process, I noticed that students gained deeper insight into their personal strengths and areas for growth. They also developed a stronger appreciation for the role of positive relationships in both learning and life. Notably, their motivation to improve these skills increased when they were actively engaged in shaping the definition of the competence. By guiding them through this exploration, I believe I helped cultivate greater awareness of the behaviours that exemplify strong interpersonal skills.

Diagnostic assessment

As part of the diagnostic assessment, I developed an **observation sheet** incorporating all the interaction and relationship behaviours identified by the students themselves. Using this tool, students engaged in self-assessment, reflecting on how frequently they demonstrated these behaviours within the initial context of the Erasmus+ project *Smart Spaces*.

This process encouraged students to become more aware of their social and emotional competences, while also offering me a broader understanding of their interpersonal strengths and challenges. The insights gained from this activity proved invaluable, enabling me to identify

individual learning needs and adapt my teaching strategies accordingly—ensuring that each student receives the personalized support necessary to thrive.

Teaching-learning activities & formative assessment

After completing the diagnostic assessment, I tracked the progression of nine distinct behaviours linked to interaction and relationship skills. I documented students' performance across varying levels of proficiency, focusing on enhancing their nonverbal communication, assertiveness, and sense of responsibility.

To foster the growth of interaction and relationship skills, it is crucial to design **learning experiences** and **formative assessments** that actively engage students and offer consistent opportunities to strengthen their social competences. With this in mind, we concentrated on a set of targeted skills: contributing meaningfully to class discussions, interacting effectively with peers, collaborating within group settings, demonstrating empathy and awareness of others' emotions and viewpoints, initiating and sustaining positive social exchanges, and utilizing self- and peer-assessment tools to reflect on personal development and offer constructive feedback to classmates.

Picture 23. Learning and assessment activity carried out with students

The ***instructional approach*** combined modelling with hands-on activities, primarily delivered through ***group projects*** that encouraged students to collaborate and communicate effectively. I modelled effective communication by actively listening, giving students my full attention, asking clarifying questions, and paraphrasing their contributions. I used clear, concise language, an appropriate tone, and supportive nonverbal cues to reinforce understanding. Empathy was central to my interactions—I consistently acknowledged and validated students' emotions.

I also demonstrated positive social behaviours by treating every student with respect and attentiveness, and by resolving conflicts in a peaceful, collaborative manner. Through my own actions, I promoted teamwork and cooperation. Classroom discussions were open and respectful, providing a safe space for students to express their ideas and opinions.

Together, we worked as a cohesive group to complete a series of mini-projects tailored to the subject matter – specifically, special electrical installations using micro-bits.

Picture 24. Carrying out mini-projects during class

Formative assessment was conducted using ***the observation sheet*** designed to track nine key behaviours. This tool was employed both during the monitoring of student activities and as a resource for students to engage in self-assessment and peer evaluation.

Observation sheet

The assessment scale refers to the frequency of each behaviour (Table 16).

First and last name: _____ Age: _____

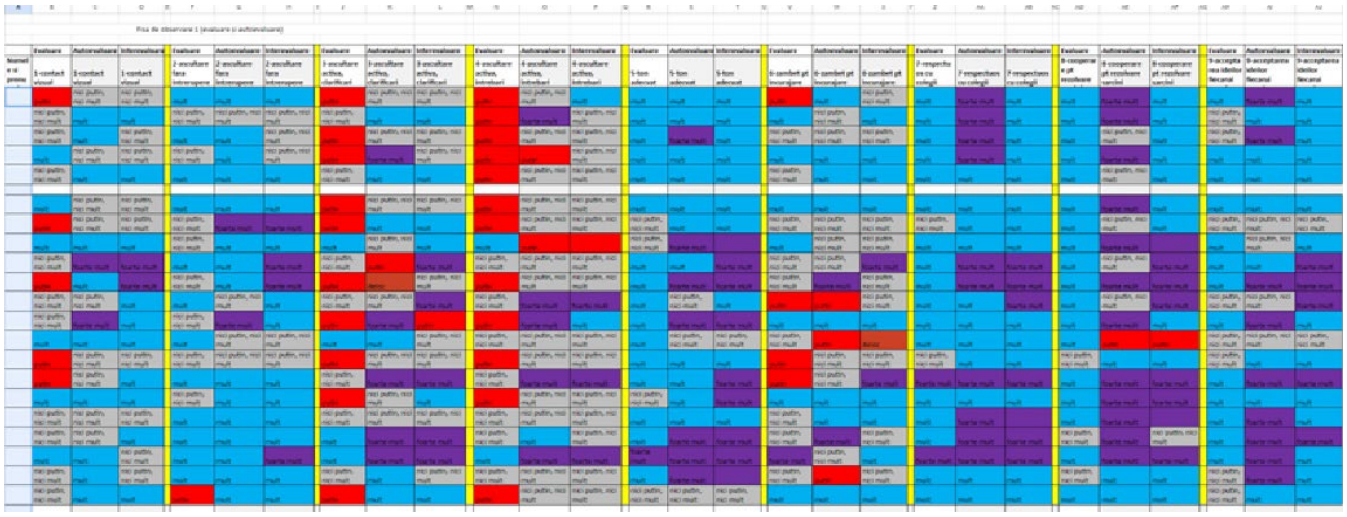
SPECIFIC BEHAVIOUR	FREQUENCY				
	Not at all	A little	Neither a little nor a lot	A lot	Very much
I maintained eye contact during discussions.					
I listened without interrupting my colleagues.					
I actively listened to my colleagues in the group and asked for clarification.					
I actively listened to my colleagues in the group and asked questions.					
I used a tone of voice appropriate for the conversation.					
I smiled at my colleagues in the group to encourage them.					
I was respectful to my group colleagues.					
I cooperated with my group colleagues to complete the tasks.					
I accepted the opinions and ideas of each member of the group.					

Table 16. Observation sheet for generic competence: Interacting with and relating to others

Additional comments: A space to note any other relevant comments, such as events.

The observation sheet served as a valuable tool for capturing students' behaviours in authentic learning contexts – such as group work, class discussions, and project-based activities. By using this instrument, I was able to identify each student's strengths in interactions, as well as pinpoint areas requiring further support and development. Its continued use over time enables us to monitor individual progress in cultivating interaction and relationship skills, and to adjust teaching strategies and interventions to meet each student's unique needs.

Drawing on the data collected, I offered personalized, constructive feedback to each student regarding their social behaviours. This feedback encouraged greater self-awareness and supported improvements in how they relate to others. Additionally, the sheet was used for both self-assessment and peer evaluation, allowing me to build a more comprehensive and nuanced understanding of each student's interpersonal competences (Picture 25).



Picture 25. Summary of information collected using formative assessment tools

I organized group discussions and offered individualized feedback to help students gain insight into their current stage in the learning process and identify the steps needed for further growth. Following the completion of several collaborative projects, students engaged in a peer feedback activity by filling out an online questionnaire. They were prompted to reflect on their classmates by answering three targeted questions: what new insights they gained from them, which behaviours they appreciated, and which behaviours they found less effective during the project.

Before initiating the final project, we held a class-wide conversation to review and reflect on areas for improvement. Together, we established new interpersonal goals focused on enhancing nonverbal communication and encouraging the use of clarifying questions to strengthen collaboration and mutual understanding.

Summative assessment

To conclude the learning unit, I conducted a **summative assessment** through a comprehensive project focused on designing a smart space – such as an intersection equipped with smart traffic lights, intelligent bridges, and adaptive lighting systems. This final project provided students with an opportunity to showcase both their accumulated technical expertise and their growth in collaboration and interpersonal skills.

Building on earlier mini-projects, this culminating task emphasized teamwork and communication. Students were organized into teams, with each member contributing distinct skills ranging from

programming and design to delivering the final presentation that simulated the smart space concept. Each team progressed through key phases: research, prototyping, testing, and presentation.

Assessment was carried out using a structured rubric that evaluated both technical competences and social skills related to teamwork and peer interaction. This approach allowed us to assess each student holistically, recognizing their individual contributions within a collaborative framework.

Within the framework of the "*Smart Spaces*" project, we emphasized to students that technical expertise – such as programming micro-bits and designing advanced circuits – is only part of the equation. Equally vital are the interpersonal and relational skills that enable effective collaboration. Given the project's interdisciplinary nature, successful execution depended on close teamwork, with each participant contributing based on their individual strengths.

Key competences such as clear communication, conflict resolution, and the ability to collaborate meaningfully were essential throughout the process. Moreover, the capacity to express ideas succinctly, demonstrate empathy, and appreciate diverse perspectives played a crucial role in fostering strong working relationships and navigating complex challenges.

4. Living in and contributing to the wider society and the world

4.1. Community building

Content area: Life skills

Students: 1st–4th grade (aged 6 to 11)

School: Community School "Tėkmė", Pabaiskas town, Ukmergė district, Lithuania

Authors: teachers Dagna Snitkienė, Dovilė Šapkinienė, Roma Vareikienė

About the school

“Tėkmės” school is a non-state, community-based educational institution that began operating in 2014 and currently has about 100 children enrolled from kindergarten to 10th grade. Working together, the entire school community has identified five key qualities that we seek to nurture and cultivate in our children. We want our children at “Tėkmė” to grow up *to be community-minded, constantly learning, self-aware, creative, and in harmony with nature.* These qualities serve as a "roadmap" that guides the development of priority competences at our school.

The school community clearly understood the importance of competences and their development even before participating in the COMPASS project. We do not limit ourselves to teaching students' competences only during class time. We have paid great attention to identifying how we can integrate the development of these five competences, which are important to our school community, into the daily lives of our students, the rhythm and structure of the school day, for example, during breaks, during meals, and throughout the school year.

Before participating in this project to develop students' competences, our community's "focus" was mainly on creating a space for students and providing conditions for the development and growth of the aforementioned competences. However, by participating in the COMPASS project, we realized that creating space and conditions for these competences to flourish is only one of the important conditions for developing competences. The second, equally important, and perhaps even more important, is the assessment of competences (diagnostic, formative, summative), which helps children observe and understand their journey of competency growth.

Introduction

This is a series of weekly sessions (30 min.) throughout the school year for the entire “Tėkmė” primary school community. These primary school student meetings foster cooperation and teamwork skills. In this way, we seek to implement the school's vision that “Tėkmė” school pupils grow up *to be community-minded*.

How did our students and we understand and define competence?

At the beginning, we discussed with the students that at our school, we all strive to grow *in a community, in harmony with nature, constantly learning, knowing ourselves, and being creative*. We pointed out that these qualities are not "given" to each of us, that we were not born with them, so to become like this, we must constantly cultivate, improve, and reflect on them. We decided that during Tuesday's "Morning Circles “, where all primary school students and teachers gather, we will focus most of our attention on "growing our *sense of community*."

Although the concept of community is quite broad and is cultivated in various ways in the daily lives of primary school students, this activity focuses primarily on strengthening students' abilities to cooperate and work in teams.

So, together with the students, we came up with a list of 18 points that help students understand their ability to work in groups:

- I know how to listen to others and not interrupt when they are speaking.
- I present my idea to the team.
- I agree with other people's ideas or explain why I think differently.
- I help my friend if he or she is having difficulty completing their task.
- I ask for help when I don't understand/can't do something.
- I share the items needed for teamwork.
- I know how to wait for my turn.
- I agree with the team on what each of us will do.
- I stick to agreements and do my part.
- I encourage my friend if he fails.
- I know how to say "thank you" when someone helps me.
- I listen to other people's opinions, even if they differ from mine.
- I don't laugh at other team members' ideas.
- I know how to calm down if I get angry while working in a team.
- I encourage all team members to get involved in the work.
- I react when all the work is "dumped" on me.
- I can work with people who are not my best friends.
- After work, I talk to the team about how the collaboration went.

What evidence did we, teachers and students, have about the learning situation? Where were we?

To find out what the starting point and experiences of student cooperation and teamwork were, we worked with the students to analyse what it means to be able to cooperate and work in a team, and then we made a list of specific, small steps.

First, we asked the students to recall and describe a specific situation when they worked with someone in a team. Thinking about their experiences, we asked the students to fill out a questionnaire (Annex 1), consisting of 18 steps for good teamwork that we had identified together. The teacher helped the first-graders with this task, as many of them needed help reading the questions on the questionnaire. The students discussed the completed self-assessment questionnaires in small groups and presented them to each other. We divided the list into the easiest and most difficult categories. This was the starting point for further improving the cooperation and teamwork skills of our school's first-graders.

What did we and our students want to achieve? In how much time?

Since developing skills is a long-term process, a single "Morning Circle" session on this topic was dedicated to developing this ability for all primary school students.

Activity objective: to develop students' cooperation and teamwork skills by helping them feel their progress in developing this competency.

Duration of the activity: a series of "Morning Circle" sessions (30 min.) once a week throughout the school year.

How did we and our students have to prepare?

Teacher preparation:

- During Tuesday's "Morning Circle" have 18 criteria for good cooperation and teamwork at hand.
- Prepare corkboards for the distribution of duties with the days of the week, team responsibilities, and team member names.
- Every six weeks, before the morning circle, divide the students into new long-term groups. As far as possible, try to make the groups as heterogeneous as possible, i.e., the group members should be different in certain respects. For example, each group should have at least one child from each class (1st grade, 2nd grade, etc.), each group should have both boys and girls, each group should have a student with special needs, etc.
- Prepare one team task for a specific "Morning Circle" and organize the necessary resources for it.
- If necessary, prepare tools for reflecting on "student responsibilities" (e.g., the traffic light method, etc.).

How did the students gain experience in developing their competences? (tasks, activities, etc.)?

In order to achieve the set goals, the main educational activity was **student responsibilities in groups.**

This is a long-term and ongoing activity that students perform in teams. This is the main focus of developing mutual cooperation and teamwork skills. Primary school pupils have six groups of duties: keeping order in the dining room, keeping order outside, keeping order on the second floor, helping during breakfast, snacks, and lunch. The duties are performed in accordance with the principles of cooperative learning. The first principle is that students are divided into long-term groups that work together for six weeks and "travel" through all the duty groups (e.g., the first week is order in the dining room, the second week is help during lunch, etc.). A specific team is responsible for one group of duties during a specific week. Students work in one team for 6 weeks until they have "rotated" through all 6 groups of duties. The second block of activities that were carried out during the aforementioned "Morning Circles" consisted of short team tasks designed not only to strengthen the bonds between team members, but also to improve teamwork skills. After these tasks, mini-reflections were carried out, allowing the children to rethink their ability to work in a group and gradually develop it. The experiences reflected on during the "Morning Circle" were later applied in the team when performing the tasks for that week.

Here are some examples of tasks that the students performed to strengthen the bonds between team members and reflect on their teamwork skills:

- Creating a team name, coat of arms/flag, and slogan.
- Identifying the positive personal qualities of team members.
- Task "Search for solutions": each team is given a description of a specific situation related to their duties. Team members had to suggest how they would act in such situations. For example, Karolis is responsible for clearing the tables after dinner, but he knows that his parents will be picking him up early today and he will not be able to fulfil his duties. How could Karolis act?
- Task "Circle of thanks": team members form a circle and thank each other by saying "Thank you for...";
- Task "We wish your team...": teams complete the sentence "We wish your team..." in a circle.
- Task "Figures": the team receives a piece of paper with the name of an object, which they must depict together as a team using their bodies. The other teams must guess what the object was.
- Task "Paper Tower": each team is given the same number of sheets of paper and, within a set time, all teams try to build the tallest tower possible.
- Task "Imaginary teammate": students in teams create and draw an imaginary teammate. They name the qualities that this person should have in order to successfully join the team, etc.

- Task "Reflection with a dice": each team member throws a dice and, depending on the number of dots that come up, answers a question related to that number (e.g., 1 – What was the easiest thing for me to do this week while performing my duties? etc.).
- Task "Secret Mission": each team receives a card with a secret Tuesday mission, which they must complete without anyone realizing that the student is carrying it out. For example, the members of the lunch team must compliment the person eating next to them, etc.

How did we help students develop self-awareness and competences? How did they know that specific competences were being developed? To what extent and at what level?

Students change roles in groups during Tuesday's "Morning Circles". That is when time is allocated to the following aspects:

Reflection on last week's work in the group:

- What did our group do well last week, where were we strong, what did we succeed in?
- What challenges did you face?
- What did not go as planned?
- How did you do working in a team?
- How did I feel working in a team?
- Were you able to share responsibilities?
- Did everyone manage to complete the tasks assigned to them? If not, why not?
- How did the team members feel about this?
- How should we handle this situation next time?

Discussion of next week's tasks:

- What responsibilities will our group be responsible for?
- What are we each personally responsible for and when?
- What should you do if a friend forgets to do their part?
- What should you do if you know that you will not be able to fulfil your part of the duties (e.g., because you are leaving early)? etc.

When answering these questions, we opened the aforementioned 18 steps on the computer screen. We trained the students to master certain words and phrases related to good teamwork and cooperation.

How did the students learn what competences they had improved and to what level?

In one long-term group, students worked together for six weeks. After that, teachers formed new teams at their discretion, based on the principles of heterogeneous grouping. Thus, during one academic year, students had the opportunity not only to continuously monitor, evaluate, and improve their teamwork skills, but also to feel their progress more quickly by "getting along" with a new group. During one academic year, each student changed 5 different teams. At the end of the

six-week cycle, each student and each team evaluated their six weeks of joint work in more detail using the evaluation questionnaire provided by the teacher at the beginning, and discussed the greatest successes and areas for improvement in the group (from 18 criteria for successful group work).

By performing their daily duties, the students were able to feel their progress in practical terms. This manifested itself in everyday life in the following ways:

- assigned tasks completed on time;
- assigned duties are performed without prompting or reminders;
- assistance is provided to a team member in performing his or her duties;
- there is a reduction in the number of conflicts over who is responsible for performing a specific duty;
- reminding each other of the necessary duties;
- agreeing with another team member if you are unable to perform your assigned task; etc.

Final remarks

The work that began in the joint "Tėkmė" primary school Tuesday "Morning Circles" really contributes greatly to fostering a sense of community among students. This is evident in two important aspects. First, the daily duties performed by the students are indeed an important and real contribution to the well-being of all members of the school community (e.g., bringing in equipment from outside, tidying up outdoor toys, sweeping the dining room, cleaning the cloakroom, cleaning the school windowsills, removing washed dishes from the dishwasher, etc.). Second, it is an excellent opportunity to develop cooperation and teamwork skills.

We plan to transfer the mutual cooperation and teamwork assessment system created during this project and use it to assess student cooperation and teamwork in other educational contexts where children work in groups, such as Lithuanian language, mathematics, social and natural science education classes, and various project activities.

ANNEX 1. Teamwork self-assessment form

Name _____ Date _____

Think about the last time you worked in a group. **Assess how well you work in a team**. Mark your answer, where *1 means "I never succeed" and 6 means "I always succeed*."

HOW AM I DOING?	0	1	2	3	4	5	6
1. When a friend is talking, I listen and don't interrupt them.							
2. I offer my ideas to the team.							
3. If I disagree with someone else's idea, I explain why I think differently.							
4. I help my friend if they are having difficulty completing a task.							
5. I ask for help when I don't understand or can't do something.							
6. I share the things we need to work together.							
7. I know how to wait for my turn.							
8. We agree with the team on what we will do.							
9. I do my part and stick to the agreement.							
10. I encourage my friend if he fails.							
11. I say "thank you" when someone helps me.							
12. I listen to other people's opinions, even if they differ from mine.							
13. I don't laugh at other people's ideas.							
14. If I get angry while working in a team, I know how to calm down.							
15. I encourage all team members to get involved in the work.							
16. I speak up if I see that all the work is being dumped on me.							
17. I can work with children who are not my best friends.							
18. After work, I talk to the team about how we did.							

My thoughts and observations:

4.2. Better together

Content area: Economics

Students: 11th grade (aged 17-18), Natural Sciences specialisation

School: Liceul Teoretic Nicolae Bălcescu Cluj-Napoca, Cluj County, Romania

Author: teacher, COMPASS project mentor Constanța Stăncescu

About the school

Liceul Teoretic Nicolae Bălcescu from Cluj-Napoca offers a comprehensive educational journey, encompassing all levels from primary to secondary and high school. At the high school level, students follow a theoretical track with two main specializations – mathematics & sciences and humanities – featuring distinct profiles such as philology, mathematics & informatics, and natural sciences. The institution's background in competence development and assessment is mainly related to teachers' regular participation in professional development programmes focused on digital skills, classroom management, educational leadership, international communication, financial literacy, and environmental awareness. Additionally, the school is actively engaged in international collaboration, taking part annually in Erasmus projects and partnerships that enrich both students and staff through cross-cultural exchange and shared learning experiences.

From Human in Society to Human for Society

To develop the generic competence *living in and contributing to the wider society and the world,* I used the COMPASS spiral model, following these steps:

Defining and describing the competence

I began by collaboratively defining the competence, inviting students to share their interpretations of its meaning. Working in groups of three, they identified specific behaviours that exemplify the competence. Having collected and clarified their responses, we concluded that this competence manifests through various actions, including: openness to recognize societal or group challenges, the ability to realistically assess issues within one's community, providing support to those in need, initiating positive change, engaging without expecting personal gain, expressing opinions in complex situations without imposing them, presenting well-reasoned arguments, and acknowledging when someone else's solution may be more effective.

Next, we explored the mental processes necessary for developing this competence. We agreed that any skill requires not only knowledge but it also entails attitudes and emotions. We reflected on how these cognitive and emotional elements could be cultivated, and considered how the study of economics might contribute to this development. The consensus was clear: active participation in community initiatives provides a tangible way to assess our current level and identify areas for growth – both in terms of what we know and how we apply that knowledge. As a result, the students proposed engaging in volunteer work, with a structured approach to monitoring and evaluating their efforts to ensure measurable outcomes.

Diagnostic assessment

In this regard, I considered appropriate to ask students to complete a table in which they self-assessed their social involvement (Table 17):

PARTICIPATION IN DECISION-MAKING AND COMMUNITY PROBLEM-SOLVING AT THE BEGINNING…		
Knowledge about (knowing)	Ability to... (do)	Values/attitudes (being) Opinions Attitudes Emotions
What a volunteer project means		
What it means to help others		
What a goal is		

Table 17. Students' social involvement skills self-assessment form

Teaching, learning, and formative assessment activities

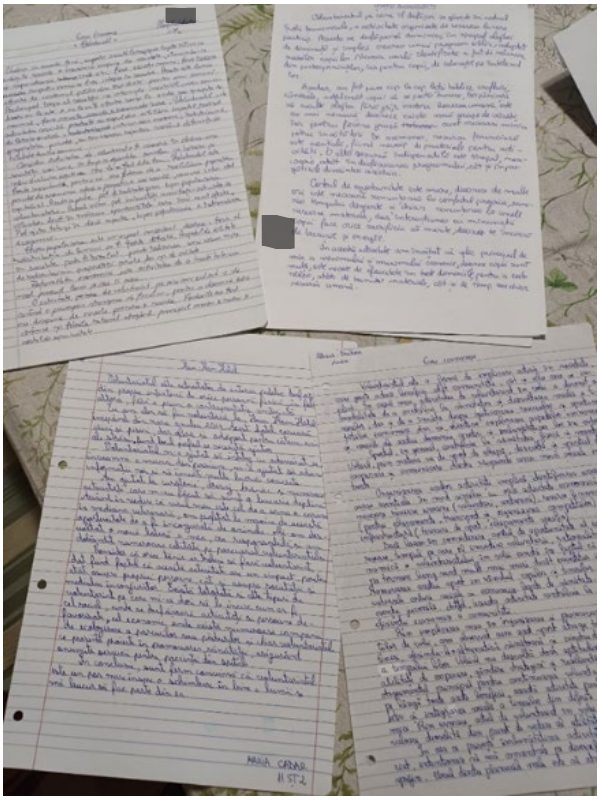
With "Alternative School Week/Săptămâna Școala Altfel" approaching, I decided to invite professionals from various fields of volunteering to address my students. I wanted them to understand not just what volunteering is, but how it actually works in practice. I reached out to coordinators across seven areas of interest, and they enthusiastically responded: environmental protection, animal welfare, elderly care, sports, arts, academic support for students with learning difficulties, and assistance for SMURD[1] teams – especially relevant since most of the 11th graders I was working with aspire to study medicine.

After meeting with these experts, the students naturally gravitated toward the areas that resonated with them. They organized themselves into seven volunteer groups, each with four members, based on their chosen field.

[1] SMURD stands for Serviciul Mobil de Urgență, Reanimare și Descarcerare, which translates to Mobile Emergency Service for Resuscitation and Extrication. It's a Romanian emergency rescue service that provides rapid medical intervention in critical situations.

In our economics class, I gave them a structured essay assignment (Picture 26), to help them reflect on their volunteer plans through the lens of economics. The essay had four key components:

1. They had to incorporate specific economic concepts: identifying social needs, determining the resources required to meet those needs, evaluating the opportunity cost of their activities, and applying the principle of economic rationality – achieving maximum impact with minimal effort.
2. They were asked to assess the usefulness of their chosen volunteer activity: would they consider it relatively useful, useful, or very useful?
3. I encouraged them to think concretely about how they could improve their volunteer work, asking them to outline at least three specific actions or goals they intended to pursue.
4. Finally, they reflected on their long-term aspirations: how would their current involvement shape their future, and in what ways would their present efforts be reflected in their future professional or personal path?



Picture 26. Essays written by students

After the students started their volunteer activities, I invited them to share their initial experiences with their classmates, using the following template (Table 18):

Project idea	
Methods for analysing community needs	
Target group of the project	
Community partners	
Preparation and planning	
Action	
Documentation (evidence of the activity carried out: photos, interviews with beneficiaries)	

Table 18. Form to share students' initial experiences with classmates

I was genuinely impressed by the students' level of interest and engagement—it exceeded my expectations. Their determination and empathy reaffirmed my belief that they are young individuals driven more by action than by theory. The integration of economics into volunteering activities proved highly effective, allowing students to explore concepts such as needs assessment, opportunity cost, budgeting, productivity, and the dynamics of supply and demand in a practical context.

During the counselling class, I successfully introduced the RAFT[1] method (Role, Audience, Format, Topic), which the students found particularly enjoyable. It allowed them to step into the roles of authorities or decision-makers and examine real-world issues from the perspectives of those directly affected. I applied this method during both the evocation and reflection phases, encouraging students to articulate their personal viewpoints on the topics discussed. In the meaning-making phase, many expressed a desire for continuity in their efforts, emphasizing that their current activities should evolve beyond one-off events. They concluded that sharing their experiences with younger peers would help sustain the spirit of engagement. Volunteering, they suggested, should be cultivated as a long-term behavioural trait.

One standout activity involved simulating a local council meeting, where students worked in seven groups to debate and resolve community issues. Another initiative that resonated deeply with both students and I was the creation of metaphorical association cards inspired by OH cards[2]. These were designed by the students and printed with support from their parents (Picture 2t). We used the cards in role-playing exercises during class and at a parent-teacher meeting, focusing on essential

[1] Reading Rockets. (n.d.). *RAFT*. https://www.readingrockets.org/classroom/classroom-strategies/raft
[2] OH Publishing. (n.d.). *OH Cards*. https://oh-cards.com/

values such as gratitude, appreciation, empathy, and determination – qualities that are vital not only in volunteering, but in everyday life.

Picture 27. Cards for volunteering created by students

Summative assessment

Together with the students, we established performance benchmarks for volunteering, outlining clear criteria across three levels of proficiency: basic, intermediate, and advanced (Table 19).

CRITERION	NOT PRESENT	PRESENT TO A SMALL EXTENT (BASIC)	PRESENT TO A LARGE EXTENT (INTERMEDIATE)	CHANGES ATTITUDES (ADVANCED)
Link to the economics curriculum	The links between the curriculum and volunteering are unclear or non-existent It is unclear what knowledge/skills can be developed through this project.	The action plan identifies some vague or potential links to the curriculum. Knowledge/skills are somewhat present, but not clear. Opportunities for skills development or content are possible but not guaranteed based on the plan.	The action plan clearly identifies links to the curriculum, including knowledge or skills. It includes opportunities for acquiring skills or deepening content as well as at least one clear assessment opportunity.	The action plan clearly, coherently, and convincingly identifies links to the curriculum. It includes multiple opportunities for skill development or deep content exploration and assessment of the level achieved. In addition, it includes interdisciplinary approaches.

The service is relevant to the community	The purpose or impact of volunteering is unclear or non-existent. It is unclear how students will learn about community needs or articulate solutions.	The action plan makes it somewhat likely that all students will engage in a volunteer project that meets community needs. Students will be able to describe the purpose of the project.	The action plan makes it likely that all students will engage in service that meets a valid community need. Students will be involved and able to describe the purpose of their work.	The action plan ensures that all students will engage in service that meets a valid community need. Students will be personally involved and able to describe the concrete impact of their work. In addition, the plan includes creative approaches to serving community needs.

Table 19. Examples of summative assessment criteria

I've been deeply engaged in exploring how students reflect on their learning in ways that contribute meaningfully to society, and how they articulate the significance of the activities they commit to. For instance, SMURD volunteers joined ambulance doctors on home visits, beginning as observers and soon assisting with medical interventions. Those supporting elderly individuals started with introductory visits to assess needs, followed by practical actions such as cleaning, delivering medication, and spending time in conversation with the "grandparents."

Students involved in supporting children with learning difficulties followed a structured schedule. Their activities included helping younger children with homework, practicing English conversation, reading Romanian texts together, and learning to summarize and interpret the messages within those texts.

We regularly shared these experiences during the counselling class, fostering a sense of mutual benefit, purpose, and joy in helping others. Interestingly, the parents of my students often expressed how they had noticed positive changes in their children's attitudes, increased maturity, and growing empathy.

To stay informed and provide guidance when needed, I encouraged students to keep a **personal diary** documenting their volunteer activities (Table 20). This journal was updated every two weeks and served as a reflective tool to track their progress and insights.

1. Reflection on project events	1. What has happened in your project in the last two weeks?	
	2. How did people respond?	
	3. What kind of problems did you experience?	
	4. How did you respond to the problems?	
	5. What is the biggest challenge in this project?	
	6. What are your plans for next week?	
2. Self-reflection (awareness of the personal growth experienced by the student, assessment of personal effectiveness in the project)	1. How did you feel participating in the project this week?	
	2. What knowledge did you use to help others?	
	3. What did you do this week?	
	4. What aspects of your work did you find most interesting?	
	5. What aspects of your work did you find most challenging?	
	6. What talents or knowledge would increase your ability to make a difference?	

Table 20. Example of self-reflection journal

Setting a new goal or reformulating a previous goal

What are our plans for the future? We are considering the following long-term goals in developing the competence "*living in and contributing to the wider society and the world*" so that each student:

- Translates classroom learning into meaningful contributions within their community.
- Makes decisions that lead to tangible, real-world outcomes.
- Evolves both personally and as an active, responsible member of society.
- Experiences success, regardless of their starting point or current abilities.
- Gains deeper insight into themselves, their surroundings, and the broader social landscape;
- Builds essential skills, such as leadership, communication, collaboration, and empathy.

Fostering this competence means cultivating values and abilities through experiences both in and beyond the classroom. By engaging actively, reflecting personally, and working together, students grow into empowered changemakers – ready to make a lasting impact on their communities and the world.

5. Living with technology

5.1. From fairy tale to radio play

Content area: ICT studies

Students: 3rd grade (aged 9)

School: Pohjois-Ritaharju School, Oulu, Finland

Author: teacher, COMPASS project mentor Matti Ryhänen

About the school

Pohjois-Ritaharju School is located in Oulu, Finland. It provides education for approximately 480 pupils in grades 1–6 and also hosts two regional groups for pupils requiring intensified support. The school's core values are collaboration, respect for others, and joy of learning.

The school's operational culture is grounded in strong collaboration and collective learning. Staff members work in multi-professional, community-driven teams that follow the principles of a learning organisation. Each team is guided by a team coach, and these coaches also form part of the school's leadership group. The development of staff members' team competences has been systematically strengthened through targeted training for several years.

Introduction

I noticed that my pupils' ICT competence developed most effectively when we used a wide range of applications and tools boldly in school. That is why I decided not to limit their practice to text and image editing, but also to include recording and editing sound and video. I made use of the many freely available applications suitable for computers, tablets, and other mobile devices.

Since many of these tools were unfamiliar to my pupils, I saw them as an excellent opportunity to spark their curiosity and creativity. In this example, I paired up my third graders for a fairy-tale project. Each pair recorded their story on the computer and then turned it into a radio play using the free programme *Audacity*.

Phase 1: Defining the competence

At the outset, I explained to the pupils what we would be practising and what the project aimed to achieve. I told them that the focus was on developing ICT competence, and I engaged them in defining the concept in the following way:

First, I asked the pupils to work in pairs and reflect on what the concept of ICT competence might mean. Each pair wrote their ideas down on paper. Then, I combined the pairs into groups of four. In these groups, pupils presented their reflections to one another. They wrote all the ideas down on a shared sheet and circled the ones they considered the most important. Finally, we moved into a whole-class discussion. Each group presented their ideas, and I recorded all of them on the board. Once all contributions were visible, we worked together to identify recurring themes.

To guide the discussion, I asked questions such as:

- Which themes were mentioned by several groups?
- What do these observations suggest about the skill?
- Can we write one sentence that describes this competence? What would it look like?

Phase 2: Baseline diagnostic assessment

This example focused on one particular aspect of ICT competence: pupils' ability to record and edit sound. For that reason, we gathered information specifically about this skill, rather than about ICT competence more broadly. The pupils' starting level was assessed with a simple form where they ticked the box that best described their current ability (Table 21).

SOUND RECORDING AND EDITING

	I CANNOT DO THIS AT ALL	I CAN DO THIS A LITTLE	I CAN DO THIS WELL
Creating a sound track			
Recording sound on a track			
Recording sound on multiple tracks			
Cutting sound tracks			
Editing sound tracks			
Saving the final audio file			

Table 21. Students' ICT competence assessment form

Through this form, pupils gained an understanding of what they already knew and what they could do, or whether the topic was still completely unfamiliar to them. At the same time, I obtained an overview of the class's competence levels, which was useful when forming working pairs.

Phase 3: Setting goals

ICT competence represented a broad area, so when goals were set, it was important to narrow down the focus in order to make practice more purposeful and targeted. This also ensured that the goals remained manageable for children. Too many goals could have made it difficult to monitor progress. In this project, a goal was set using the same diagnostic form, where the pupil marked their target level with a tick in a different colour.

Phase 4: Instructions for practice

In this project, I built the practice framework around a chosen fairy tale, which could be any story. I noticed that traditional animal tales worked well, since they were short, simple, and lent themselves easily to creative sound effects. Sometimes I also use pupils' own stories, though in those cases I need to allocate more time for the project.

The practice proceeded as follows:

- I asked pupils to form pairs. Using the diagnostic assessment results, I matched them so that at least one pupil in each pair had more experience with ICT tools. Each pair then produced a joint radio play.
- We read and explored the fairy tale together as a class.
- I introduced the basic functions of *Audacity*: starting a project, saving files, creating sound tracks, recording on tracks, cutting tracks, editing tracks, and saving the final mix. To make sure the pupils retained what I showed, I usually demonstrated only the first few steps at the beginning so they could start practising quickly. Editing and mixing I left for later demonstrations.

Phase 5: Practice and formative assessment

I divided the practice roughly into five stages, each of which took about one lesson.

1. Practising file saving and exploring programme features.
2. Creating sound tracks and experimenting with recording.
3. Cutting and editing sound tracks.
4. Recording the fairy tale.
5. Recording sound effects. Finalising and saving the completed audio file.

I made sure to allocate sufficient time for this phase, especially since creating sound effects and experimenting with filters took longer than expected. I also gave pupils the freedom to experiment creatively, because I noticed that curiosity-driven exploration enhanced their competence development.

For formative assessment, I used the same diagnostic form as a self-assessment tool, for example at the end of each lesson. In addition, I provided feedback while pupils were working, guiding their attention to aspects most relevant for developing their competence.

Phase 6: Summative assessment

Summative assessment was conducted at the end of the project using the same assessment form as in the beginning. Before the assessment, I organised a listening session where all pairs presented their radio plays and received positive and constructive feedback from the class. I reminded the pupils that simply producing a completed radio play was already an achievement, so the feedback should always be framed with this in mind. Using the assessment form, both the pupils and I gained detailed information about progress in different aspects of the competence. I kept this feedback personal, and in addition, I sometimes held short assessment discussions with individual pupils or pairs. In these conversations, we also evaluated their working processes.

Phase 7: Setting a new goal

The skills pupils acquired and competence developed in this project could easily be applied in future work, with goals progressing to a deeper level. Since the principles of sound editing software also apply to most video editing programmes, the same skills could later be used for producing class videos.

As the pupils' competence developed, I revised the assessment form to make it more detailed. If basic skills still needed more practice, I used the same form again to support creating another radio play. For pupils whose skills had developed rapidly, I gave the option of producing a radio play independently, which presented them with a greater challenge.