

O3 Final Report

2021.



Table of content

1. Executive Summary	3
Results.....	3
2. O3 tasks and background of the measurement	7
The LELLE 2 Project	7
O3 Task breakdown	8
Connection with other outputs.....	9
Questionnaire development	12
Learning skills assessment package	13
3. O3 Student measurements.....	14
First measurement	14
Affects of the COVID-19 situation on the Project.....	17
Second measurement.....	19
4. Comparative analysis of the two measurements.....	20
Comparison between Research groups and Control groups.....	23
Conclusions.....	26
ANNEX 1 - Questionnaire.....	27
ANNEX 2 - Learning skills assessment package.....	47
Guidelines to use the questionnaire	47
ANNEX 3 – Survey data in separate database	50
ANNEX 4 – Data comparison of schools	51

1. Executive Summary

The O3 phase of the LELLE 2 Project was carried out between the spring of 2019 and winter of 2020. The aims of the Output was to develop a competence measurement questionnaire and administer it with students participating in the O4 phase of the project. There were two survey campaigns and we examined the difference between the two measurements.

The aim of the LELLE 2 Project is to enhance the efficiency of secondary education helping to build the development of three key competences in learning:

- Critical Thinking (CT),
- Problem Solving (PS),
- Managing own Learning Processes (MOLP)

In the O3 phase, the first LELLE Project's questionnaire was used as the base for the development of the student measurement questionnaire. TEGA and UP led the development and all school partners contributed to the modifications to suit the language and structure of the questionnaire to high school student's level.

Results

The first measurement was completed by 577 students with an average age of 15,3 years. The second survey had 458 complete answers with an average age of 16,6 years.

As it is displayed on the Table 8. and the graph (Fig.7.), a modest improvement was made through the two semesters of implementing the LELLE 2 materials in the subjects.

The research groups produced more development than the control groups and also this difference was consistent, while in some cases, the results of the control groups declined. Although most of the results were small and none exceeded the one whole point threshold that was defined in the Application.

Table 8. Comparison of Research and Control groups												
	CT1	CT2	CT3	CT- SCORE	PS1	PS2	PS3	PS- SCORE	MOLP1	MOLP2	MOLP3	MOLP- SCORE
AVG RES1	3,16	2,87	2,99	3,01	2,95	2,94	2,36	2,75	2,54	2,87	2,67	2,69
AVG RES2	3,31	2,96	3,16	3,14	3,02	3,11	2,39	2,84	2,75	3,03	2,94	2,91
RES DIFF	0,15	0,09	0,17	0,14	0,08	0,16	0,02	0,09	0,21	0,16	0,27	0,22
AVG CTR1	3,16	2,84	2,98	2,99	2,94	2,94	2,39	2,76	2,62	2,77	2,64	2,67
AVG CTR2	3,10	2,92	3,05	3,03	2,87	3,01	2,51	2,80	2,60	2,87	2,65	2,71
CTR DIFF	-0,06	0,08	0,08	0,03	-0,07	0,07	0,12	0,04	-0,01	0,11	0,02	0,04

AVG: average, RES1, 2: research groups 1st and 2nd measurement, CTR1, 2: Control groups 1st and 2nd measurement, DIFF: differences between measurements

The biggest improvement was related to the Management of own learning process (0,22 total): the Organisation and evaluation of learning process subskill (0,27 point) and Strategy/training/time management subskill (0,21 point). Critical thinking came in second with a total of 0,14 point of development, the Identify connections and recognise opportunities subskill was the third biggest to develop (0,17 points). Problem solving was the least succesful according to the numbers with just 0,09 points in total growth, but Identify possible solutions subskill came in fourth at 0,16 points (leveling with Information management subskill in MOLP).

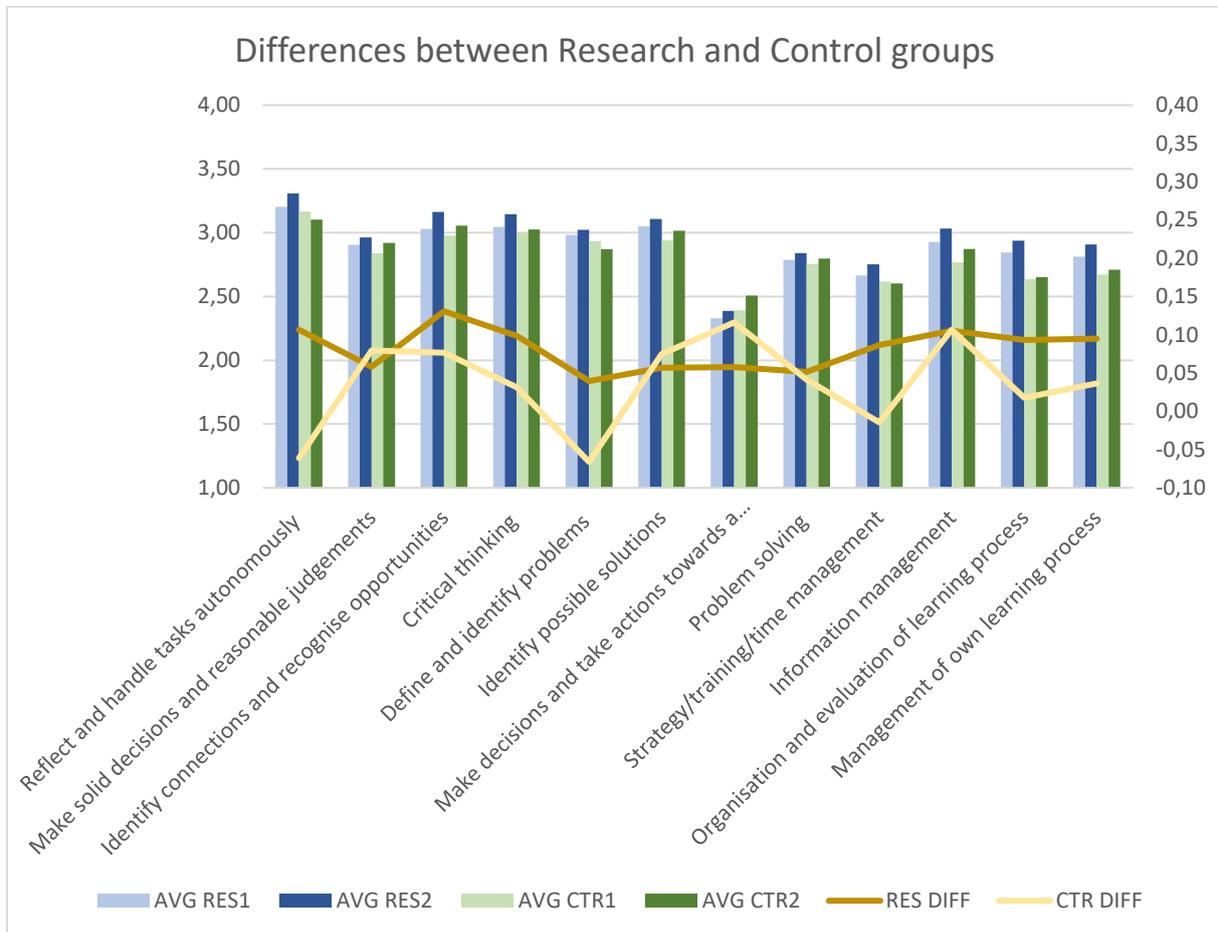


Figure 7. Differences between Research and Control groups, total averages

Comparing the two measurements, we can conclude that the quantitative thresholds were met in the O3 phase and we measured a slight development of all examined competences. The limitations of the results however are rooted in partly the effects of the COVID-19 lockdown and the hectic introduction of online education in the participating countries. We also lost a considerable amount of students from the second measurement who left the schools during the pandemic.

The fact that in the O1 and O2 phases the developed methods were created in the logic of the traditional offline teaching environment and that most of the teachers had to teach online for half of the duration of O4 had an unexpected effect on the results as well.



This project has been funded with support from the European Commission. This publication (communication) reflects the views only of the author, and the Commission cannot be held responsible for any use, which may be made of the information contained therein. Project number: 2018-1-HU01-KA201-047839

As we develop the Gateway, we pay extra attention to supply future users with online tools, therefore we decided to include as many online games and exercises as an option as the teachers can develop in extra effort besides their Lesson Plans. This can help teachers to focus on designing more up-to-date teaching environment with the use of our material even if we do go back to business with students finally getting back to school after the pandemic later this year.

2. O3 tasks and background of the measurement

The LELLE 2 Project

The aim of the LELLE 2 Project is to enhance the efficiency of secondary education helping to build the development of three key competences in learning:

- Critical Thinking (CT),
- Problem Solving (PS),
- and Managing own Learning Processes (MOLP)

Having acquired this key competence, students will also receive better grades, accomplish their tasks better and faster, and will be motivated to reach higher. Students taking a job after secondary school will have higher job security due to their efficiency and their ability to acquire job-related knowledge quickly. This will contribute to increased competitiveness of their home countries' and Europe's economy as a whole.

Supporting teachers in adopting collaborative and innovative practices: our project supports teachers in adopting collaborative and innovative practices in order to enhance the learning skills development of secondary school students.

The development of relevant and high-quality skills and competences are planned to be reached through the creation of five innovative outputs:

1. Best Practice Collection on Learning Skills Development
2. How to Teach How to Learn - teachers training in secondary schools
3. Learning skills assessment of secondary school students
4. Pedagogical materials for learning skills development
5. European Learning Skills Development Gateway (website)

This report is about the third phase of the project, that has been carried out between March 2019 and January 2021. In this chapter, we collected the information from the Application Form and the Project Plans on all O3 activities.

O3 Task breakdown

In O3, Learning skills assessment of secondary school students, we planned that the project objectives will be reached and project results will be considered of high quality if

- i) 100 students from each participant schools (30 from MARIANUM) will take part in the student assessment tests at the beginning and at the end of school year, and
- ii) at least 25% improvement will be realized in the answers given to assessment questions in each domain of Critical Thinking, Problem Solving, and Managing own Learning Processes.

P5 (TEGA) was responsible for the coordination of the activities within this output.

Activities defined in the application:

A1 - Producing student assessment tests

Under this activity we will produce the student assessment tests. The tests will be drafted by the secondary school partners (P4-P7) in English. In doing so they will collaborate with each other via online communications. Drafting the assessment tests will be led and coordinated by school TEGA. The draft version then will be send to P1, P2, and P3 who will make its final version. The final version will be written in English.

The assessment test will be made on the basis of project LELLE (tailor-made for secondary school students) and the Best Practice Collection (O1). The tests will include the questionnaire and evaluation criteria and guidelines.

Finally, P1 will produce the questionnaire and will make it available online.



This project has been funded with support from the European Commission. This publication (communication) reflects the views only of the author, and the Commission cannot be held responsible for any use, which may be made of the information contained therein. Project number: 2018-1-HU01-KA201-047839

A2 - Translation of assessment tests

Each secondary school project partners (P4-P7) will receive final version of the assessment from P1 written in English. School partners translate the questionnaire and the evaluation guidelines into their own national languages.

A3 - Implementing student assessments

School partners (P4-P7) will implement the student assessments at the beginning and at the end of the school year. Students will fill out the questionnaire online. Teachers will supervise and administer both assessments and they will do data analysis as well. Results of the assessments and data analysis from each school partner will be received by P1 who will store them in the project's data bank. P1 will prepare the data and the accompanying material available for further statistical analysis.

Connection with other outputs

The O3 student assessment test is based on the previous O1 phase results, such as the skill definitions, the glossary and the training material developed in the O2 phase. It is also relying on our experience with teachers in C1, where we discussed the possibilities of an online measurement in their high schools.

Skill definitions (o1)

Critical Thinking includes: to reflect and handle tasks autonomously; to make sound decisions and reasonable judgements; to identify connections and recognize opportunities; critically evaluate ideas.

Problem Solving includes: to understand the process of successful problem-solving; to be able to solve problems independently and collaboratively; compounding analytical and creative thinking; assertive, open communication.

Managing own Learning Processes includes: strategy, training, time management; the ability to access, gain, process and assimilate new knowledge and skills, organise one's own learning, evaluate one's own work; integrating information into learning process in appropriate ways, adjusting way of learning to own goals. We used the same categories as in LELLE, see Table 1. and Fig.1.

Competence:	Critical thinking	Problem Solving	Managing own learning process
Description by Lelle:	To reflect and handle tasks autonomously; to make sound decisions and reasonable judgements; to identify connections and recognise opportunities. critically evaluate ideas	To understand the process of successful problem-solving; to be able to solve problems independently and collaboratively. a mixture of analytical and creative thinking. Assertive, open communication.	Strategy, training, time management. The ability to access, gain, process and assimilate new knowledge and skills, organise their own learning, evaluate their own work. integrating information into the learning process in appropriate ways, adjusting way of learning to own goals.

The subskills of the three key skills were defined as follows in the previous LELLE project:

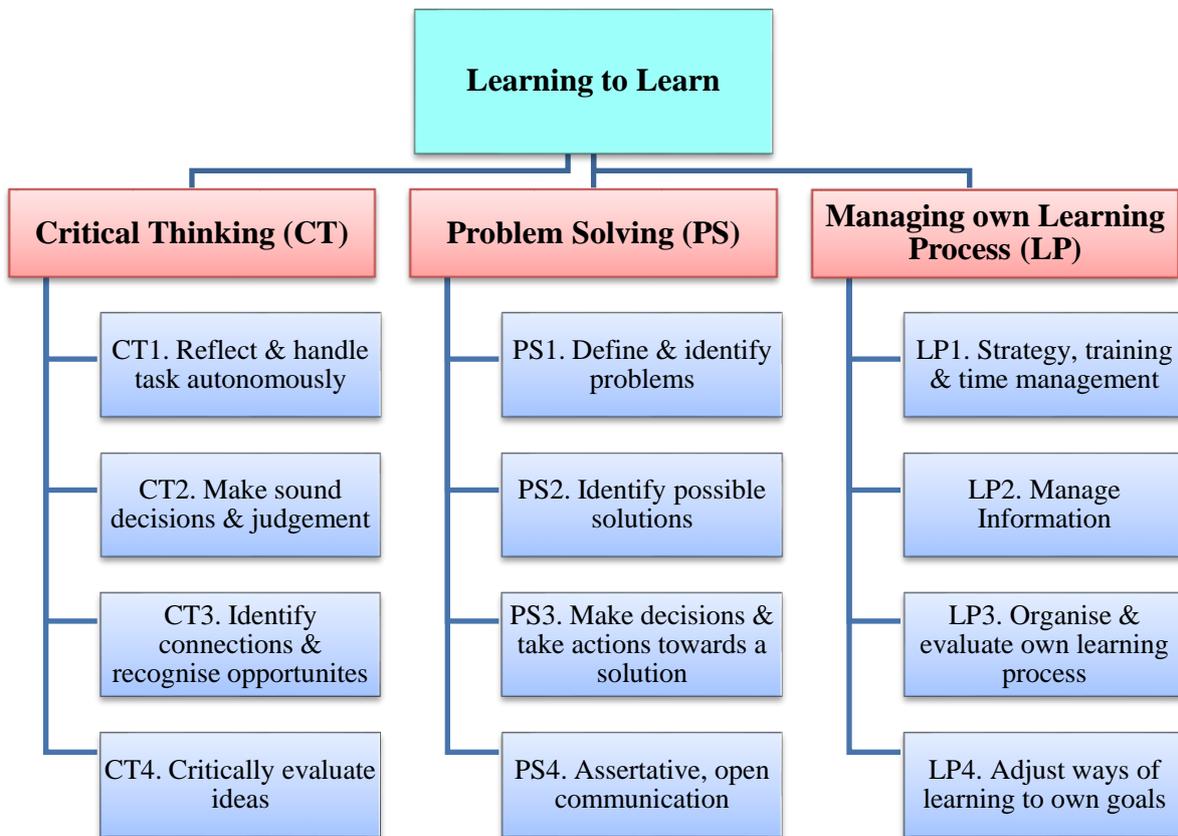


Fig.1. Subskills used in the first LELLE project

Further Outputs

The measurement is also connected with O4 (pedagogical materials for learning skills development), teachers used the learning skills development methods and techniques provided by training material (O2). They included suggested best practices and key competence development methods (collected in O1 and fine tuned in O2) in their Lesson plans developed for their own subjects. The measurement is a helping tool for teachers to monitor the development of students in O4.

O5: European Learning Skills Development Gateway is under way. The measurement tool will be available for download from the Gateway, so educators can freely use it in their work.

Questionnaire development

In the O3 phase, the first LELLE Project’s questionnaire was used as the base for the development of the student measurement questionnaire. TEGA and UP led the development and all school partners contributed to the modifications to suit the language and structure of the questionnaire to high school student’s level. We believe that we compiled an easily administered and understandable tool. (full questionnaire in ANNEX 1)

In order to adjust the subskills to the learning goals of high schools, we took out the last subskill from the Lelle structure, because most of the teachers advised that this goal is too high for secondary school students (see fig. 2). Afterwards we ran a multiple phase language check on how the wording and phrasing of the statements can be best understood and translated. After this phase, we finalized and proof read the ready questionnaire.

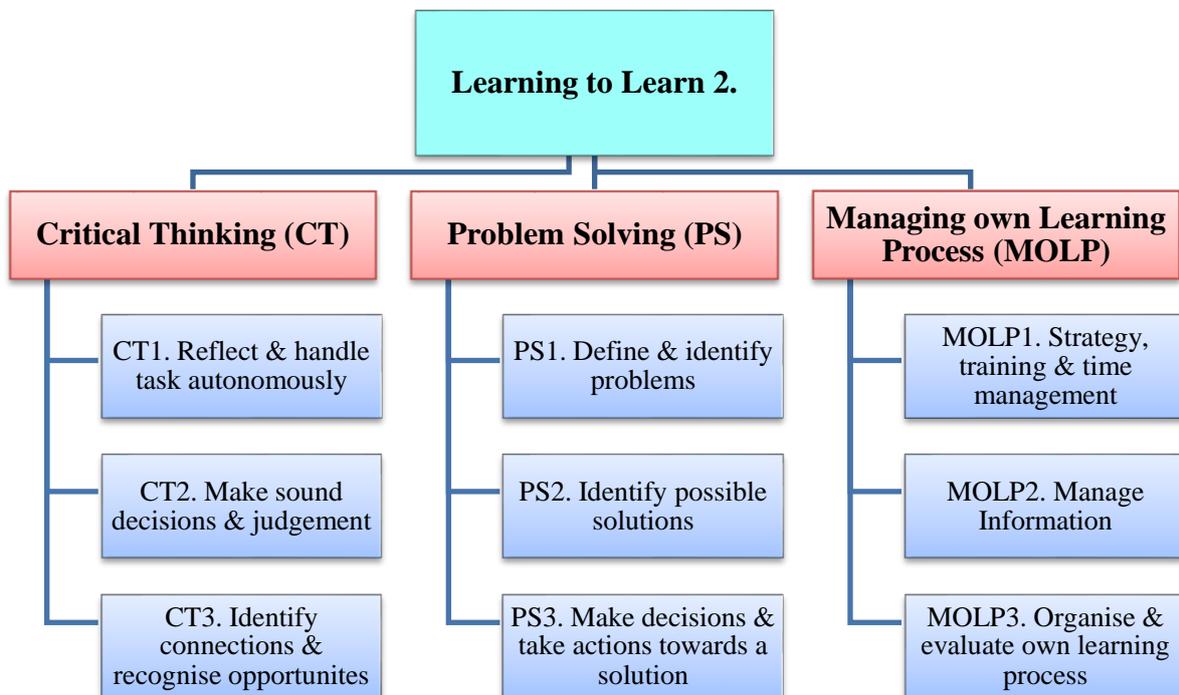


Fig 2. Modified LELLE 2 skills tree



This project has been funded with support from the European Commission. This publication (communication) reflects the views only of the author, and the Commission cannot be held responsible for any use, which may be made of the information contained therein. Project number: 2018-1-HU01-KA201-047839

In order to be flexible with the administration of the questionnaire, we installed it in the Limesurvey site, where it is available in all partner languages and it is a mobile-optimised platform. We created five separate links for the schools, but all languages are accessible through all links to be safe:

- English (Base language):

<https://kerdoiv.gtk.uni-pannon.hu/index.php/317167?lang=en>

- Estonian:

<https://kerdoiv.gtk.uni-pannon.hu/index.php/317167?lang=et>

- Hungarian:

<https://kerdoiv.gtk.uni-pannon.hu/index.php/317167?lang=hu>

- Romanian:

<https://kerdoiv.gtk.uni-pannon.hu/index.php/317167?lang=ro>

- Slovak:

<https://kerdoiv.gtk.uni-pannon.hu/index.php/317167?lang=sk>

Learning skills assessment package

We developed Learning skills assessment package to make the O3 output easy to use. This report is containing this package in ANNEX 1 and ANNEX 2, but in the Gateway, this will be one document. We also present our data anonymously that was a requirement of the Application. This is a separate database and ANNEX 3 of this report.

3. O3 Student measurements

First measurement

The first measurement took place in the fall semester of 2019 according to the original project timeline. All schools completed the measurement in a timely manner. Sample: 577 students completed the survey with all answers. The following tables show the demographic data and the language they used.

Table 2. Gender distribution M1	
male	
	292
female	
	285

Table 3. Language distribution M1	
EN	92
ET	155
HU	325
RO	5
SK	0

Table 4. Participants per school	
TEGA	118
IBELA	152
MARIANUM	66
KURESSAARE	241
Total:	577

Average age of the students was 15,3 years.

The tables show that we met the quantitative requirements of the Project and also that the special character of the project is visible: because of the differences in official partner languages and national and teaching languages, the users (students) mostly filled out the Hungarian questionnaire, because most of the schools (except for Kuressaare Gymnasium) teach mostly in Hungarian.

The next figure (Fig. 3.) shows the averages of the subskill and skill scores of the first measurement. This figure is the first part of O3 and can not be interpreted without the second measurement, but we have to make some remarks comparing this measurement with those of the Lelle Project. In the secondary school setting, we did not register complaints about the lucidity of the statements and/or the process. The teachers assigned to supervise the testing (all schools chose to do it in their computer rooms, so every student can get help if needed and this way the number of participants can be granted) reported that the test was easily accessible and understandable for the students.

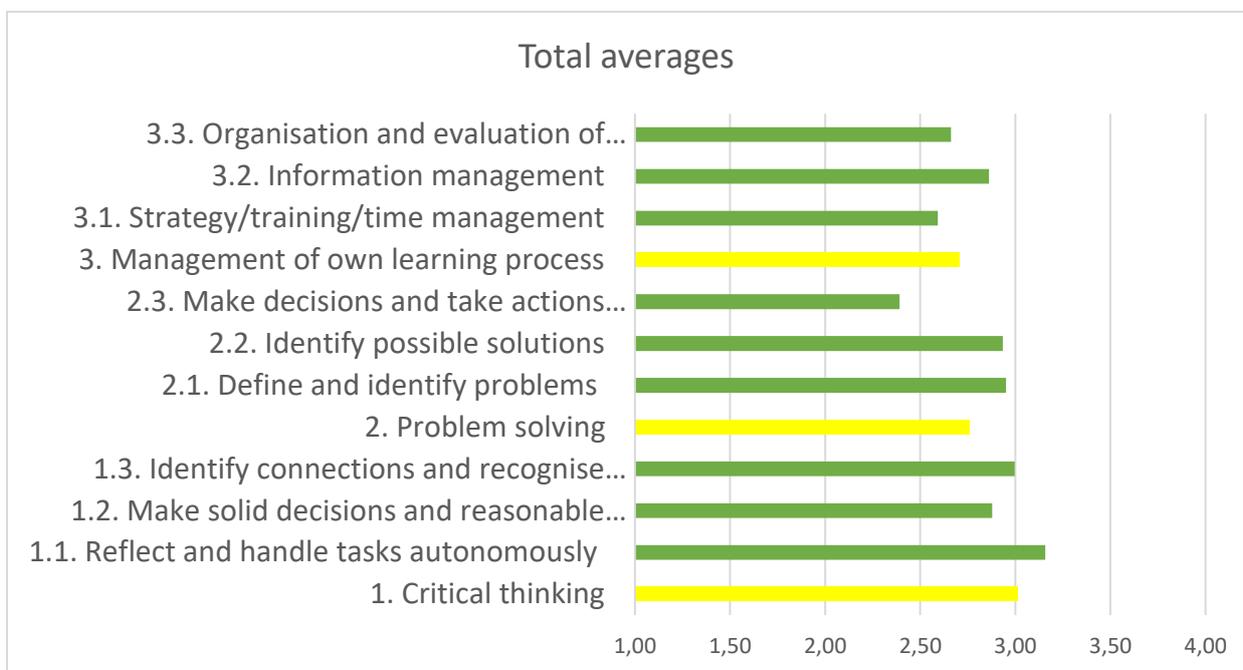


Fig. 3. Averages of the first measurement (M1)



This project has been funded with support from the European Commission. This publication (communication) reflects the views only of the author, and the Commission cannot be held responsible for any use, which may be made of the information contained therein. Project number: 2018-1-HU01-KA201-047839

Also we can see a slight shift in the results downwards that suggest that the efforts for enhancing the validity through unambiguous statements and reverse items payed off. Therefore we can conclude that the first measurement was succesful.

In the first part of O3, after the measurement, the schools decided on how they select students for the O4 phase. This means that part of the group of students taking part in the survey were assigned to Research group and a smaller part of the students were assigned to a Control group. The difference between the groups was that the Research groups recieved classes with LELLE 2 materials implemented in them, while the Control groups did not. After one schoolyear, we ran the measurement again to see how the two group performed differently.

Affects of the COVID-19 situation on the Project

The outbreak of the novel coronavirus caused pandemic in Europe had a tremendous effect on our project as well. First of all, most European education systems were forced to switch to online education from mid-March 2020 and could not return to normal ever since.

This brought a major issue to project goals and demanded thoughtful actions. The Project's governing body decided to suspend all project activities from the 1st April to the 31st of May 2020 in order to give the Partners time to organize life and work, help teachers and students to prepare and run the semester in an online environment. This halt did not include O5 preparations because EKU could manage to start developing the Gateway and UP was also involved strongly in the planning phase and launch of O5.

In the spring, leading partner UP discussed the possible solutions for this emergency with the National Agency and created alternatives for the upcoming and delayed activities. A modified timeline was created for the project and a suspense was asked and granted for the final deadline of the Project that is now August 31st 2021.

We also decided to hold further TPMs and gathering activities online unless there is a safe way to carry on in a personal way. As of January 2021, vaccines are rolled out, but there is no sufficient distribution and availability for every stakeholder and possible participant of our multiplier events. So according to what we know at this time, we continue with the online solutions.

After the 31st of May, we kindly asked all of our Partners for a feedback on how they can cope with their duties and how they see they can manage the project tasks. An agreement was made on how we can carry on. At that time, we thought that the fall semester would be carried out in presence, so we postponed most activities including the O3 second measurement and O4 teaching activities to that time. Unfortunately, this was not the case, so a new re-planning had to be done in September 2020. Therefore most of the O4 activities could not be carried out, because the online tools weren't ready and all activities that we developed were suited for conventional education (where the students are present).



This project has been funded with support from the European Commission. This publication (communication) reflects the views only of the author, and the Commission cannot be held responsible for any use, which may be made of the information contained therein. Project number: 2018-1-HU01-KA201-047839

As for O3, this resulted in that we partly did not reach the goals that we intended and set up in the application form. We could not measure the effect of the materials developed in the project and used in O4 correctly because of the overwhelming difficulties of the online education and the necessary use of all other types of teaching methods. Also regarding the breakdown of Research and Control groups, in most of the schools in the online environment it was difficult to differentiate between the two groups, so there may have been overlaps in using LELLE 2 methodology in both groups.

However, there were a plus side of this extreme situation: the penetration of online tool usage skyrocketed and most of the teachers who were averse of the virtual world and the online solutions had to more or less take a different aspect and at least try to use them. According to our partners, they experienced a great deal of positive feedback from students and extended cooperation with them and their own colleagues during the lockdown. But at the same time teachers and school staff felt sorrow and hiatus about not having their beloved students at the school. Some of the students also told us that they miss being there and meeting their peers and teachers.

We do hope that our final conference where we will present all proceedings and results of our Project can be held in both online and offline ways, so those who are already vaccinated can join us.

Second measurement

The second measurement took place in the fall of 2020 according to the modified project timeline. All schools completed the measurement in a timely manner. A total of 458 students provided full answers for the second measurement. The following tables show the demographic data and the language they used.

Table 5.	
Gender distribution M2	
male	
	209
female	
	249

Table 6.	
Language distribution M2	
EN	168
ET	118
HU	157
RO	15
SK	0

Average age of the students was 16,6 years.

The same characteristics can be seen in the second measurement, as in the first: the quantitative requirements have been met. Interestingly, almost half of the students of TEGA competed the second measurement in English. The reason for this can be that a large proportion of students taking part in the survey are involved in English subjects in the O4 phase and took the test with the supervision of English teachers. The Romanian language users number somewhat increased too.

4. Comparative analysis of the two measurements

The comparison of the two measurements (see Fig 4. and Table 7.) shows that there is a slight improvement in the case of almost all subskills. In this graph, scatter control is also displayed that shows both measurement's scatters. It indicates that the results fall into the commonly recognised validity (between 0.3 and 0.6).

In Fig 5. we displayed the names of the subskills respectively. In Fig 6. the improvement measures are highlighted. That reads that in most cases, the improvement of the subskills is between 1% and 2,5%.

Table 7. Comparison of measurement data			
FACTORS	Critical thinking	Problem solving	Management of own learning process
AVERAGE M1	3,000	2,764	2,690
AVERAGE M2	3,063	2,790	2,731
DIFFERENCE (point)	0,063	0,026	0,041
DIFFERENCE (%)	2,084	0,931	1,522

In the case of Critical thinking and Management of own learning process, the improvement is considerable. In the case of Problem solving, the difference is not that salient. The only subskill that produced a slight decline is Define and identify problems that is obviously under the Problem solving skill. However, this difference is so small that is within the margin of error (-0,019%).

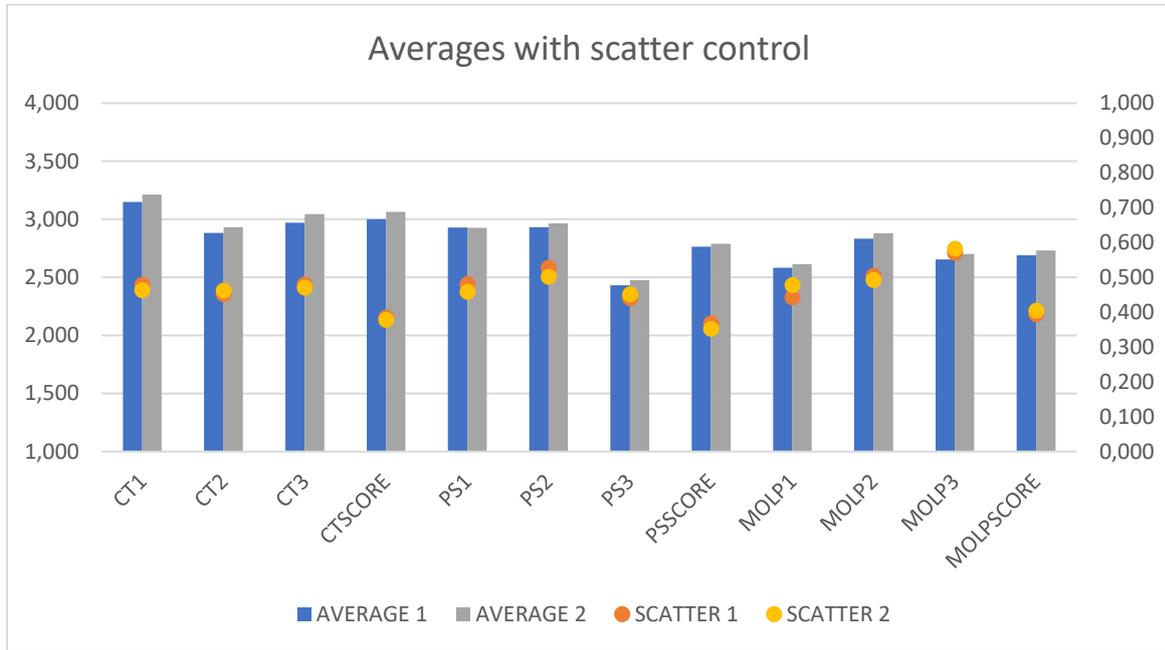


Fig. 4. Averages (left scale) and scatters (right scale) of the second measurement (M2) compared to the first measurement (M1)

The upper diagram shows the averages with scatters, whilst the diagram below displays the names of the factors. The improvement is visible on both figures and the scatters remain close in both measurement.

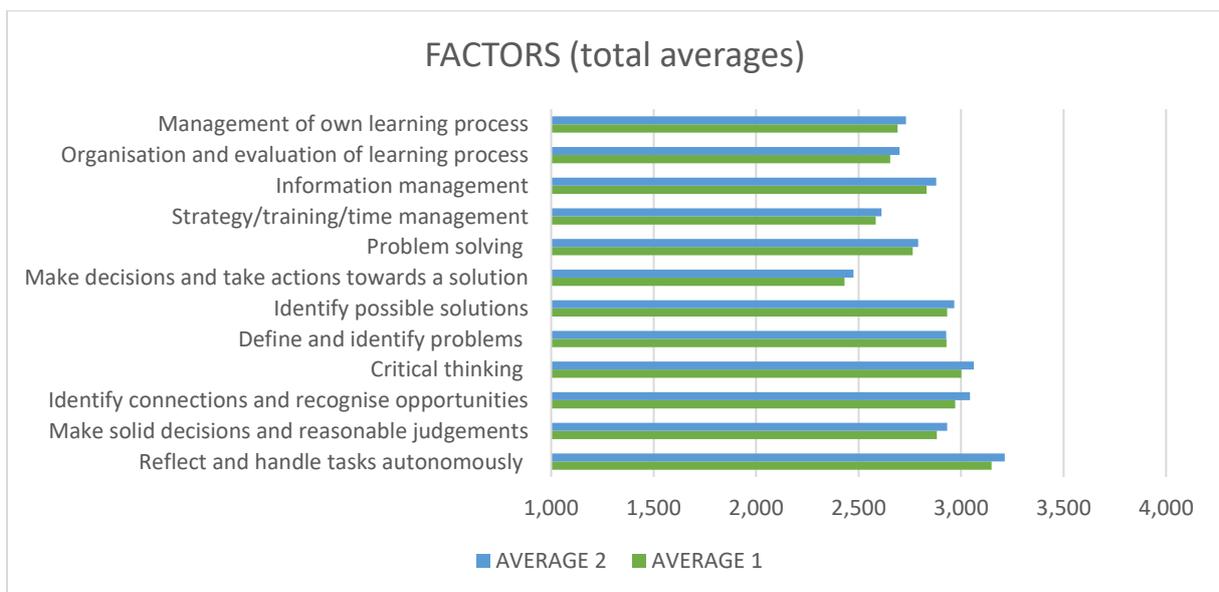


Fig. 5. Averages of M1 and M2 with factor names

In the diagram below (Fig 6.) the difference between the two measurement is displayed in every subskill and the three competences respectively. The biggest improvement was measured in the identification of connections and recognition of opportunities that is under the Critical thinking competence. This was the skill that developed most, also the second biggest difference is related to CT: to reflect and handle tasks autonomously. This can be the effect of the online education as well, because students were left to their own devices at home.

The third biggest difference is under Problem solving: Making decisions and taking actions towards a solution. Surprisingly, PS was the competence that developed least of all and we can see that there is one subskill that even declined a bit: Defining and identifying problems, although the difference (-0,019%) is way under the margin of error.

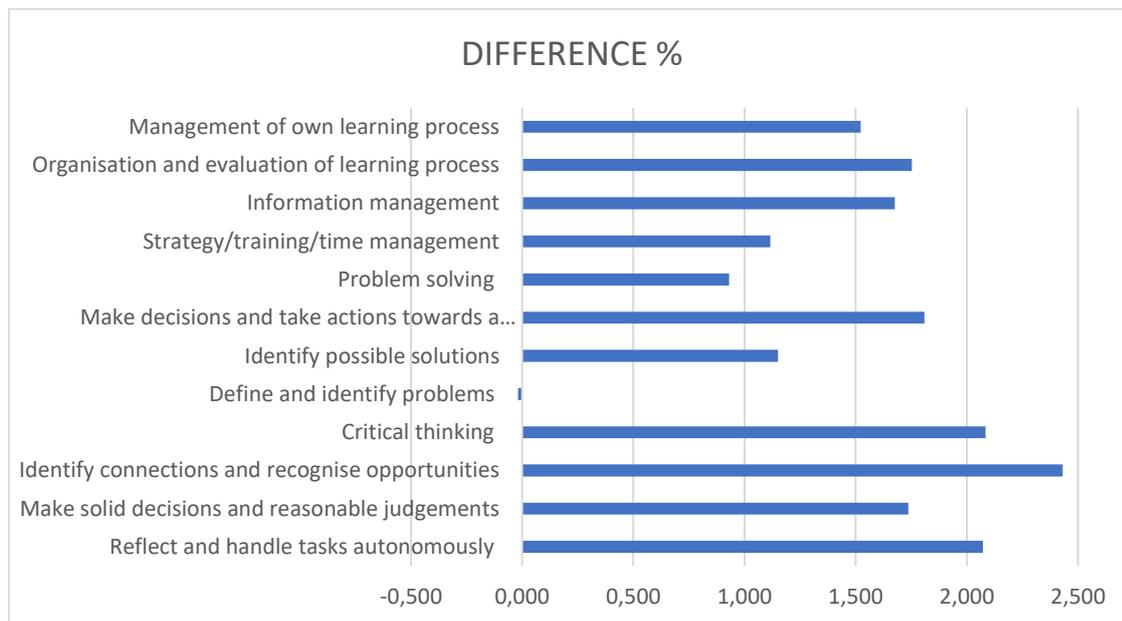


Fig. 6. Differences (%) between the averages of M1 and M2

Comparison between Research groups and Control groups

In the chapter before, we handled all the data as one group. In this chapter we present the data of the different groups.

Table 8. shows the raw data of the two measurement with the breakdown of the data from the two groups. There are some differences in numbers regarding the total numbers because we lost some students in the second measurement and most of these students were in control groups. Also some of the students did not use the same ID in the second measurement as they used in the first making it extremely hard to identify which is the corresponding data, so some of the data of the second measurement could not be used in the Research and Control group comparison. We did our best to identify every student, but we could only use the data in the comparison where we were sure which group they were assigned to.

Table 8. Comparison of Research and Control groups												
	CT1	CT2	CT3	CT- SCORE	PS1	PS2	PS3	PS- SCORE	MOLP1	MOLP2	MOLP3	MOLP- SCORE
AVG RES1	3,16	2,87	2,99	3,01	2,95	2,94	2,36	2,75	2,54	2,87	2,67	2,69
AVG RES2	3,31	2,96	3,16	3,14	3,02	3,11	2,39	2,84	2,75	3,03	2,94	2,91
RES DIFF	0,15	0,09	0,17	0,14	0,08	0,16	0,02	0,09	0,21	0,16	0,27	0,22
AVG CTR1	3,16	2,84	2,98	2,99	2,94	2,94	2,39	2,76	2,62	2,77	2,64	2,67
AVG CTR2	3,10	2,92	3,05	3,03	2,87	3,01	2,51	2,80	2,60	2,87	2,65	2,71
CTR DIFF	-0,06	0,08	0,08	0,03	-0,07	0,07	0,12	0,04	-0,01	0,11	0,02	0,04

AVG: average, RES1, 2: research groups 1st and 2nd measurement, CTR1, 2: Control groups 1st and 2nd measurement, DIFF: differences between measurements

On Figure 7, the differences were visualized: the light blue bars are the averages of the research groups in the first measurement, dark blue bars are the averages of the research groups in the second measurement, light green bars are the averages of the control groups in the first measurement, dark green bars are the averages of the control groups in the second measurement, on the left scale; whilst on the right scale the dark gold line shows the differences of the research groups in the two measurements and the light gold line is the differences of the control groups in the two measurements.

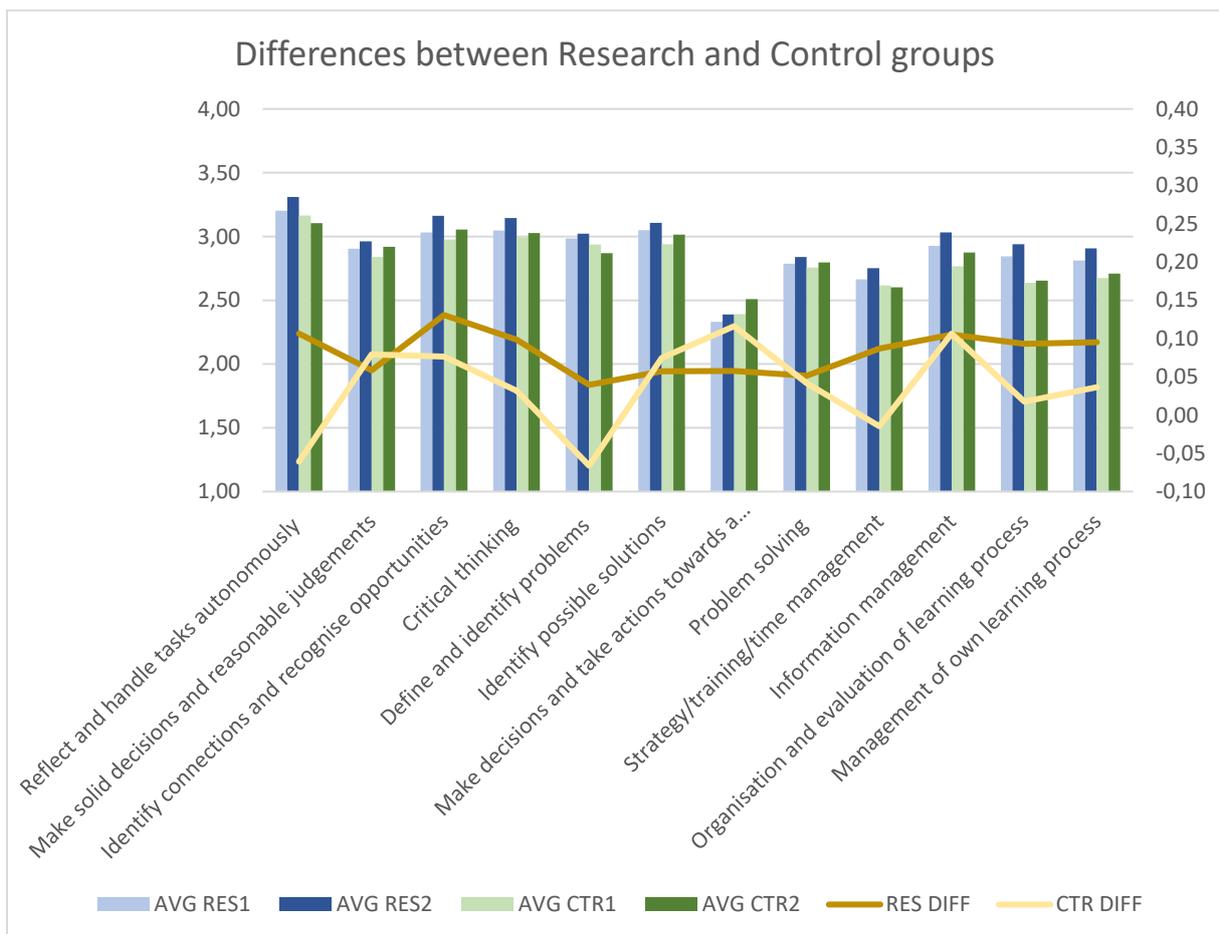


Figure 7. Differences between Research and Control groups, total averages

It is visible on Fig. 7. that the research groups produced more development than the control groups and also this difference was consistent, while in some cases, the results of the control groups declined. Although most of the results were small and none exceeded the one whole point threshold that was defined in the Application. The biggest improvement was related to the Management of own learning process (0,22 total): the Organisation and evaluation of learning process subskill (0,27 point) and Strategy/training/time management subskill (0,21 point). Critical thinking came in second with a total of 0,14 point of development, the Identify connections and recognise opportunities subskill was the third biggest to develop (0,17 points). Problem solving was the least successful according to the numbers with just 0,09 points in total growth, but Identify possible solutions subskill came in fourth at 0,16 points (leveling with Information management subskill in MOLP).

The biggest differences in control groups were Make decisions and take actions towards a solution (0,12 points) and Information management (0,11). These can be interpreted as an effect of the COVID situation as well.



This project has been funded with support from the European Commission. This publication (communication) reflects the views only of the author, and the Commission cannot be held responsible for any use, which may be made of the information contained therein. Project number: 2018-1-HU01-KA201-047839

Conclusions

Comparing the two measurements, we can conclude that the quantitative thresholds were met in the O3 phase and we measured a slight development of all examined competences. The developments are slightly bigger in the Research groups than in the Control groups. The limitations of the results however are rooted in partly the effects of the COVID-19 lockdown and the hectic introduction of online education in the participating countries. We also lost a considerable amount of students from the second measurement who left the schools during the pandemic.

The fact that in the O1 and O2 phases the developed methods was created in the logic of the traditional offline teaching environment and that most of the teachers had to teach online for half of the duration of O4 had an unexpected effect on the results as well. In addition, a whole point of improvement stated in the Application form was probably a too optimistic pledge considering the innovative potential and the distance in mindset of the teachers in the educational systems involved in the project. The skill based education within the subjects requires more preparation and attention.

As we develop the Gateway, we pay extra attention to supply future users with online tools, therefore we decided to include as many online games and exercises as an option as the teachers can develop in extra effort besides their Lesson Plans. This can help teachers to focus on designing more up-to-date teaching environment with the use of our material even if we do go back to business with students finally getting back to school after the pandemic later this year. Hopefully.



This project has been funded with support from the European Commission. This publication (communication) reflects the views only of the author, and the Commission cannot be held responsible for any use, which may be made of the information contained therein. Project number: 2018-1-HU01-KA201-047839

ANNEX 1 - Questionnaire



LELLE 2 O3

Questions for self-assessment for secondary education

(Scale: disagree - slightly disagree – slightly agree - agree)

TEGA, UP

Reversed items in yellow

Demographic panel:

1. Age
2. Gender
3. ID (because we have to connect the two measurements, email address or nickname is required)

1. Critical thinking questions

In this area, the skill „critical thinking” is evaluated. The area covers three sections, each with four statements. The aim is to discover students’ ability to reflect and handle tasks autonomously and their making of sound decisions and reasonable judgments. Further, it is of interest to discover how they identify connections and recognize opportunities and evaluate ideas critically.

1.1. Reflect and handle tasks autonomously

1: I can usually separate or break a whole into parts to discover their nature, function and relationships.

2: I can usually work efficiently on my own without supervision.

3: I can usually reflect on a given task.

4: I can usually do tasks independently.

4R: It is hard for me to do tasks independently.

1.2. Make solid decisions and reasonable judgements

5: I can present the logical scheme I used to come to a decision.

6: I can usually make deductions or draw conclusions that are demonstrated by evidence.

7: I usually leave out my personal feelings when I make judgments about an idea.

7R: When it comes to making judgements about an idea, I can hardly leave out my personal feelings about it.

8: I can usually make solid decisions.

1.3. Identify connections and recognise opportunities

9: I can usually identify repetitive models or connections in a given situation.

10: I can usually imagine a plan and its possible results.

10R: It is hard for me to imagine the possible results of a plan.

11: I can show the steps I took from the start to the end of the task.

12: I am fast at noticing new conditions and come up with fresh ideas regarding possible opportunities.

2. Problem- solving questions

In this area, the skill „Problem- solving” is evaluated. The area covers three sections each with four statements. The aim is to discover students’ ability to define and identify problems as well as possible solutions. Further, it is of interest how they make decisions and actions towards these solutions.

2.1. Define and identify problems

17: If I encounter a problem, I usually examine it from different points of view.

18: I can usually separate important from unimportant things.

18R: I find it hard to separate important things from unimportant things when I face a problem.

19: When I experience a difficulty, usually the first thing I do is to examine it.

20: I usually segment the problem into smaller tasks I need to do in order to solve it.

2.2. Identify possible solutions

21: When I face a problem, usually my first thought is to solve it.

21R: When I face a problem, my first thought is that it is too difficult for me to solve.

22: I can usually find a solution in a difficult situation.

23: I usually come up with multiple solutions to a problem.

24: I am usually able to reflect on the possible solutions.

2.3. Make decisions and take actions towards a solution

25: When I meet a problem, I usually know what to do immediately.

26: I can usually choose quickly between two solutions.

26R: When it comes to making decisions, I tend to hesitate on how to act.

27: I usually try to involve everyone concerned in the problem solving process.

28: I usually act quickly and examine the consequences of my decision afterwards.

3. Management of own learning process questions

In this area, the skill „Management of own learning process” is evaluated. The area covers three sections each with four statements. The aim is to discover students` ability to organize and evaluate their learning process. Further, it is of interest how they find strategies and training opportunities and estimate and adjust them to their own goals.

3.1. Strategy/training/time management

33: I usually develop strategies and which steps to follow for my learning processes.

34: I usually apply different methods to learn more efficiently.

34R: I learn the material as it is, for example I read it several times.

35: I usually use different resources in my learning process.

36: I usually plan the time I need to learn new things.

3.2. Information management

37: I usually consciously focus my attention on important information.

38: I usually explore the meaning and significance of new information.

38R: I don't consider the meaning of new information, I just want to learn it.

39: I usually write summaries or draw pictures or diagrams to help me understand while learning.

40: I usually try to translate new information into my own words.

3.3. Organisation and evaluation of learning process

41: I usually plan what I need to do within the given timeframe.

42: I usually list activities in order of importance.

42R: I don't take time to prioritize my tasks, I just do them as they pop up in my mind.

43: I usually organize my tasks in clear groups or categories.

44: I usually evaluate the costs and benefits of the learning activities.



Erasmus+

This project has been funded with support from the European Commission. This publication (communication) reflects the views only of the author, and the Commission cannot be held responsible for any use, which may be made of the information contained therein. Project number: 2018-1-HU01-KA201-047839



LELLE 2 O3

Önértékelő kérdőív középiskolás diákoknak

(nem értek egyet – valamennyire nem értek egyet –

valamennyire egyetértek - egyetértek)

– TEGA, UP-

1. Kritikai gondolkodás

Ebben a részben a „kritikai gondolkodás” készségét értékelik. A felmérés három részből áll, mindegyik négy állítással. A cél, hogy felfedezzük a diákok azon képességét, hogy hogyan kezelik a feladatokat és hogy hogyan hoznak megalapozott, ésszerű döntéseket. Továbbá érdemes felfedezni, hogy hogyan azonosítják a kapcsolatokat, ismerik fel a lehetőségeket, és értékelik kritikusan az ötleteket.

1.1 Feladatok értelmezése és önálló munka

1: Általában el tudom különíteni vagy fel tudom osztani az egészet, hogy felismerjem a jellegét, funkcióját és az összefüggéseket.

2: Általában hatékonyan tudok dolgozni egyedül, felügyelet nélkül.

3: Általában átgondolom a megoldandó feladatot.

4: Általában önállóan tudok feladatokat megoldani.

4R: Nehezen megy, hogy önállóan oldjak meg feladatokat.

1.2. Határozott és ésszerű döntések

5: A döntésem logikus menetét be tudom mutatni.

6: A bizonyítékokkal alátámasztható következtetéseket általában le tudom vonni.

7: A döntéseimet általában nem az érzelmeim alapján hozom meg.

7R: Ha dönteni kell, nem tudok elvonatkoztatni az érzelmeimtől.

8: Általában határozott döntéseket hozok.

1.3: Összefüggések azonosítása és a lehetőségek felismerése

9: Egy adott helyzetben általában felismerem az ismétlődő mintákat vagy összefüggéseket

10: Általában el tudok képzelni egy tervet és annak lehetséges eredményeit.

10R: Számomra nehéz elképzelni egy terv lehetséges eredményeit.

11: Általában be tudom mutatni a feladat lépéseit az elejétől a végéig.

12: Gyorsan felismerem az új helyzeteket, és új ötleteket fogalmazok meg a lehetséges megoldásokkal kapcsolatban.

2. Problémamegoldás

Ebben a részben a „problémamegoldás” készségét értékelik. A terület három részből áll, amelyek négy állítással rendelkeznek. A cél a tanulók azon képességének felderítése, hogy hogyan határozzák meg és azonosítsák a problémákat, valamint a lehetséges megoldásokat. Továbbá érdekes, hogy hogyan hoznak döntéseket és intézkedéseket ezekre a megoldásokra.

2.1. A problémák felismerése és megfogalmazása

17: Ha probléma merül fel, általában különböző szempontokból vizsgálom.

18: El tudom választani a lényegeset a lényegtelentől.

18R: Amikor egy problémával kerülök szembe, nehezen tudom szétválasztani a fontos és kevésbé fontos részleteket.

19: Ha nehézséggel találkozom, az első dolog, hogy elemzem (megvizsgálom).

20: Általában a problémákat kisebb feladatokra bontom, hogy meg tudjam oldani.

2.2 A lehetséges megoldások felismerése

21: A problémákat általában egyből meg akarom oldani.

21R: Amikor egy problémával szembesülök, az első gondolatom, hogy túl bonyolult, hogy megoldjam.

22: Egy nehéz helyzetben is találok megoldást.

23: Egy problémát többféle módon is meg tudok oldani.

24: A legtöbb esetben fel tudom mérni a lehetséges megoldásokat.

2.3 Döntések és lépések a megoldás érdekében

25: Ha egy problémával találkozok, azonnal tudom, mit kell tennem.

26: Könnyen tudok választani két lehetséges megoldás közül.

26R: Ha dönteni kell, hajlamos vagyok arra, hogy bizonytalankodjak.

27: Minden érintettet bevonok a döntéshozatalba.

28: Gyorsan döntök és csak utána gondolom végig a következményeket.

3. Saját tanulási út menedzselése

Ebben a részben a „Saját tanulási folyamat menedzselését” értékelik. A terület három részből áll, amelyek négy állítással rendelkeznek. A cél, hogy felfedezzük a tanulók azon képességét, hogy hogyan szervezik és értékelik saját tanulási folyamatukat. Továbbá érdekes, hogy hogyan találnak stratégiákat és képzési lehetőségeket, és hogyan igazítják őket saját céljaikhoz.

3.1. Stratégia/képzés/időbeosztás

33: Megvan az elképzelésem arról, hogy a tanulmányaim során milyen lépésekre van szükségem.

34: Általában különböző módszereket alkalmazok azért, hogy hatékonyabban tanuljak.

34R: Úgy tanulok, ahogy jön, pl. többször elolvasom.

35: Különböző forrásokat használok a tanulási folyamat során.

36: Megtervezem, mennyi időre van szükségem, hogy megtanuljak egy új dolgot.

3.2. Információ menedzsment

37: Tudatosan a fontos információkra összpontosítok.

38: Általában felkutatom az új információ jelentését és jelentőségét.

38R: Nem gondolkodom az új információk jelentésén, egyszerűen csak megtanulom.

39: Általában összefoglalókat, ábrákat vagy diagramokat készítek, hogy jobban megértsem, amit tanulok.

40: Megpróbálom az új információkat a saját szavaimra fordítani.

3.3 A tanulási folyamat megszervezése és értékelése

41: Megtervezem, hogy egy adott időkereten belül mit kell tennem.

42: A feladatokat fontossági sorrendbe állítom.

42R: Nem fecsérlek időt arra, hogy fontossági sorrendet állítsak fel, úgy csinálom a feladatokat, ahogy adódik.

43: Egyértelműen csoportosítom a feladataimat.

44: Általában értékelem a tanulási tevékenységek költségeit és hasznát.



Erasmus+

This project has been funded with support from the European Commission. This publication (communication) reflects the views only of the author, and the Commission cannot be held responsible for any use, which may be made of the information contained therein. Project number: 2018-1-HU01-KA201-047839



LELLE 2 O3

Chestionar de autoevaluare pentru elevii de ciclu liceal

(Nu sunt de acord – Sunt puțin în dezacord –

Sunt doar puțin de acord – Sunt de acord)

– TEGA, UP-

1. Gândirea critică

În această secțiune va fi evaluată competența numită “gândirea critică”. Secțiunea conține trei categorii, care la rândul lor conțin patru afirmații. Scopul este identificarea abilității elevilor de a reflecta și îndeplini sarcini în mod autonom, de a lua decizii logice și a emite judecăți pertinente. Adicional, ne interesează să descoperim modul prin care aceștia găsesc conexiuni, conștientizează oportunitățile și evaluează idei în mod critic.

1.1. Procesul de reflecție și îndeplinirea sarcinilor în mod autonom

- 1: De obicei pot separa sau diviza un întreg în părți pentru a-i descoperi: natura, funcția, relațiile.
- 2: De obicei pot efectua muncă independentă în mod eficient fără supraveghere.
- 3: De obicei pot reflecta asupra unei sarcini date.
- 4: De obicei îmi pot îndeplini sarcinile în mod independent.
- 4R: Îmi este greu să îndeplinesc sarcinile în mod independent.

1.2. Abilitatea de a lua decizii logice și de a emite judecăți pertinente

- 5: De obicei pot arăta schema logică pe care am folosit-o pentru a ajunge la o decizie pe care am luat-o.
- 6: De obicei pot deduce sau trage anumite concluzii care sunt demonstrate de probe.
- 7: De obicei îmi pot exclude sentimentele personale dacă trebuie să emit judecăți cu privire la o anumită idee.
- 7R: Dacă trebuie să emit judecăți cu privire la o anumită idee, îmi este greu să exclud sentimentele personale.
- 8: De obicei pot lua decizii logice.

1.3. Identificarea conexiunilor și conștientizarea oportunităților

- 9: De obicei pot identifica modele repetitive sau conexiuni în anumite situații.
- 10: De obicei pot elabora un plan și îmi pot imagina rezultatele sale posibile.
- 10R: Este greu să-mi imaginez posibilele rezultate ale unui plan.
- 11: De obicei pot arăta modurile prin care am ajuns la încheierea unei sarcini.
- 12: De obicei îmi este ușor să observ condiții noi și aduc idei noi cu care gestionez posibile oportunități.

2. Rezolvarea problemelor

În această secțiune va fi evaluată competența numită “rezolvarea problemelor”. Secțiunea conține trei categorii, care la rândul lor conțin patru afirmații. Scopul este identificarea abilității elevilor de a defini și identifica probleme și posibile soluții. Adicional, ne interesează să descoperim modul în care aceștia iau decizii și acționează în vederea rezolvării problemelor.

2.1. Definirea și identificarea problemelor

17: În cazul în care întâlnesc o problemă, de obicei o analizez din mai multe puncte de vedere.

18: De obicei pot distinge care aspecte sunt importante și care nu sunt atunci când mă confrunt cu o problemă.

18R: Mi se pare greu să disting lucrurile importante de lucruri neimportante atunci când mă confrunt cu o problemă.

19: În cazul în care întâlnesc o dificultate, de obicei primul lucru pe care îl fac este să o analizez.

20: De obicei împart problema în sarcini mai mici pentru a o rezolva.

2.2. Identificarea posibilelor soluții

21: În momentul în care mă confrunt cu o problemă, de obicei prima mea intenție este să o rezolv.

21R: Când mă confrunt cu o problemă, primul meu gând este că este prea greu pentru mine să rezolv.

22: De obicei pot găsi o soluție dacă mă aflu într-o situație dificilă.

23: De obicei găsesc soluții multiple atunci când mă confrunt cu o problemă.

24: De obicei știu să evaluez corect soluțiile posibile ale unei probleme.

2.3. Modul în care se iau decizii și se acționează în vederea rezolvării problemelor

25: Atunci când întâlnesc o problemă, de obicei știu imediat ce am de făcut.

26: De obicei pot face o alegere rapidă atunci când îmi sunt prezentate două soluții.

26R: Când e vorba de luarea deciziilor, am tendința de a ezita să acționez.

27: De obicei încerc să îi implic pe toți cei vizați, în procesul de rezolvare a problemelor.

28: De obicei acționez rapid și îmi analizez consecințele deciziei mai târziu.

3. Autogestionarea procesului de învățare

În această secțiune va fi evaluată competența numită “autogestionarea procesului de învățare”. Secțiunea conține trei categorii, care la rândul lor conțin patru afirmații. Scopul este identificarea abilității elevilor de a-și organiza și evalua procesul de învățare. Adicional, ne interesează modul în care aceștia găsesc strategii și oportunități de învățare și le estimează și adaptează obiectivelor lor.

3.1. Gestionarea strategiilor/ timpului/ procesului de învățare

33: De obicei elaborez strategii și pași de urmat în procesul meu de învățare.

34: De obicei pun în aplicare metode diferite pentru a învăța mai eficient.

34R: Învăț materialul așa cum este, de exemplu, îl citesc de mai multe ori.

35: De obicei folosesc resurse diferite în procesul meu de învățare.

36: De obicei planific timpul de care am nevoie pentru a învăța lucruri noi.

3.2. Gestionarea informațiilor

37: De obicei îmi concentrez voluntar toată atenția asupra informațiilor importante.

38: De obicei analizez sensul și importanța noilor informații.

38R: Nu analizez sensul noilor informații, vreau doar să învăț.

39: De obicei scriu rezumate sau fac schițe pentru a înțelege mai bine în timp ce învăț.

40: De obicei încerc să reformulez informațiile noi cu cuvintele mele.

3.3. Organizarea și evaluarea procesului de învățare

41: De obicei planific ceea ce trebuie să fac pentru a respecta intervalul de timp stabilit.

42: De obicei îmi clasific activitățile în ordinea priorităților.

42R: Nu am timp pentru a-mi acorda prioritate sarcinilor mele, eu le fac doar pe măsură ce îmi apar în minte.

43: De obicei îmi organizez sarcinile în grupe și categorii clare.

44: De obicei pot estima avantajele și dezavantajele activităților de învățare.



Erasmus+

This project has been funded with support from the European Commission. This publication (communication) reflects the views only of the author, and the Commission cannot be held responsible for any use, which may be made of the information contained therein. Project number: 2018-1-HU01-KA201-047839



LELLE 2 O3

Küsimused enesehindamiseks gümnaasiumiastmele

(pole üldse nõus – pigem pole nõus – pigem olen nõus – olen täiesti nõus)

– TEGA, UP-

e-posti aadress

vanus

poiss/tüdruk

Palun hinda, mil määral nõustud järgmiste väidetega iseenda kohta.

1. Küsimused kriitilisest mõtlemisest

Selles valdkonnas hinnatakse kriitilise mõtlemise oskust. Valdkond hõlmab nelja osa, igas osas neli väidet. Eesmärk on välja selgitada õpilaste võimed iseseisvalt töötada, teadlikke otsuseid vastu võtta ja neid ratsionaalselt kasutada. Lisaks on huvitav teada saada, kuidas õpilased tuvastavad seoseid ja tunnevad ära võimalusi ning hindavad ideid kriitiliselt.

1.1. Ülesande iseseisev reflekteerimine ja käsitlemine

- 1: Ülesande olemuse, sisu ja seoste avastamiseks suudan tavaliselt terviku osadeks jagada.
- 2: Suudan tavaliselt tõhusalt töötada ka iseseisvalt ilma juhendamiseta.
- 3: Suudan tavaliselt reflekteerida mulle antud ülesannet.
- 4: Mul on raske iseseisvalt ülesandeid täita.

1.2. Kindlate otsuste ja mõistlike hinnangute andmine

- 5: Ma suudan esitada loogilise skeemi, mida otsuse tegemiseks kasutasin.
- 6: Tavaliselt oskan teha järeldusi või otsuseid, mida saab tõenditega tõendada.
- 7: Kui asi puudutab otsuste tegemist, ei saa ma kuidagi välja jätta oma isiklike tundeid.
- 8: Ma suudan tavaliselt langetada kindlaid otsuseid.

1.3. Seoste loomine ja võimaluste teadvustamine

- 9: Ma oskan tavaliselt ära tunda korduvaid mudeleid või seoseid antud olukorras.
- 10: Mul on raske ette kujutada oma lahendusplaani võimalikke tulemusi.
- 11: Suudan näidata samme, mida tegin ülesande sooritamisel algusest lõpuni.
- 12: Olen kiire uute tingimuste märkamisel ja pakun värskeid ideid võimalike võimaluste kohta.

2. Küsimused probleemide lahendamise oskuse kohta

Selles valdkonnas hinnatakse probleemide lahendamise oskust. Valdkond hõlmab nelja osa, igas osas neli väidet. Eesmärk on välja selgitada õpilaste võimed probleeme määratleda ja tuvastada ning võimalikke lahendusi leida. Lisaks on huvitav teada saada, kuidas õpilased teevad otsuseid ja tegutsevad nende lahenduste suunas.

2.1. Probleemide määratlemine ja tuvastamine

- 17: Kui puutun kokku probleemiga, siis uurin seda tavaliselt erinevatest vaatenurkadest.

18: Mul on probleemidega silmitsi seistes raske lahutada olulisi asju ebaolulistest.

19: Kui mul on raskusi, siis esimese asjana tavaliselt uurin seda probleemi.

20: Segmenteerin tavaliselt probleemi väiksemateks ülesanneteks, mida pean selle lahendamiseks tegema.

2.2. Võimalike lahenduste väljaselgitamine

21: Kui ma seisan silmitsi probleemiga, on minu esimene mõte, et see on minu jaoks liiga raske lahendada.

22: Suudan tavaliselt keerulises olukorras lahenduse leida.

23: Pakun tavaliselt probleemile mitu lahendust.

24: Tavaliselt suudan mõelda võimalike lahenduste üle.

2.3. Otsuste tegemine ja tegutsemine lahenduse leidmiseks

25: Probleemiga kokku puutudes tean tavaliselt, mida kohe teha.

26: Otsuste tegemisel kipun kõhklema, kuidas käituda.

27: Püüan probleemide lahendamise protsessi tavaliselt kaasata kõiki asjaosalisi.

28: Tegutsen tavaliselt kiiresti ja uurin tagantjärele oma otsuse tagajärgi.

3. Küsimused oma õppeprotsessi juhtimisest

Selles valdkonnas hinnatakse oma õppeprotsessi juhtimist. Valdkond hõlmab nelja osa, igas osas neli väidet. Eesmärk on välja selgitada õpilaste oskus juhtida ja hinnata oma õppeprotsessi. Lisaks on huvitav teada saada, kuidas õpilased leiavad õpistrateegiaid ja koolitusvõimalusi ning hindavad ja kohandavad neid vastavalt oma eesmärkidele.

3.1. Strateegia / koolitus / aja juhtimine

33: Tavaliselt töötan välja strateegiad ja sammud, mida oma õppeprotsessis järgida.

34: Õpin materjali sellisena, nagu see on, näiteks loen seda mitu korda läbi.

35: Oma õppeprotsessis kasutan tavaliselt erinevaid allikaid.

36: Tavaliselt kavandan aega, mida mul on uute asjade õppimiseks vaja.

3.2. Teabe juhtimine

37: Tavaliselt keskendan oma tähelepanu olulisele teabele.



This project has been funded with support from the European Commission. This publication (communication) reflects the views only of the author, and the Commission cannot be held responsible for any use, which may be made of the information contained therein. Project number: 2018-1-HU01-KA201-047839

38: Ma ei võta arvesse uue teabe sisu, tahan seda lihtsalt ära õppida.

39: Kirjutan tavaliselt kokkuvõtteid või joonistan pilte või diagramme, mis aitaksid mul õppimise ajal asjast aru saada.

40: Üritan tavaliselt uut teavet tõlkida oma sõnadesse.

3.3. Õppeprotsessi korraldamine ja hindamine

41: Tavaliselt planeerin, mida pean etteantud aja jooksul tegema.

42: Mul ei ole aega oma ülesannete tähtsuse järjekorda seadmiseks, vaid teen neid just siis, kui need mulle meelde tulevad.

43: Korraldan tavaliselt oma ülesanded selgetes rühmades või kategooriates.

44: Hindan tavaliselt õppetegevuse kulusid ja kasu.



Erasmus+

This project has been funded with support from the European Commission. This publication (communication) reflects the views only of the author, and the Commission cannot be held responsible for any use, which may be made of the information contained therein. Project number: 2018-1-HU01-KA201-047839



LELLE 2 O3

Otázky na sebahodnotenie pre žiakov stredných škôl

(nesúhlasím – čiastočne nesúhlasím - čiastočne súhlasím - súhlasím)

- TEGA, UP-

Aká je vaša e-mailová adresa?

Koľko máte rokov?

Ste chlapec alebo dievča?

Do akej miery súhlasíte s tvrdeniami o vás?

Vylepšenie dotazníka LELLE

1. Otázky týkajúce sa kritického myslenia

V tejto oblasti sa hodnotí zručnosť „kritického myslenia“. Táto oblasť pokrýva štyri časti, každá so štyrmi výrokmi. Cieľom je zistiť, či študenti dokážu samostatne reflektovať a vyriešiť úlohy a urobiť správne rozhodnutia, ktoré si vedú odôvodniť. Ďalej je zaujímavé zistiť, ako sú schopní identifikovať súvislosti a kriticky hodnotiť názory a postoje.

1.1. Samostatne reflektovať a riešiť úlohy

1: Obyčajne viem rozpoznať celok a rozdeliť ho na jednotlivé časti, aby som zistil ich povahu, funkciu a vzťahy.

2: Obyčajne viem efektívne pracovať sám, aj bez kontroly/dozoru.

3: Obyčajne dokážem premýšľať o danej úlohe.

4R: Je pre mňa ťažké samostatne riešiť úlohy.

1.2. Robiť jednoznačné rozhodnutia a rozumné úsudky

5: Dokážem prezentovať logickú schému, ktorú som použil pri rozhodovaní.

6: Obyčajne viem vyvodiť závery a dôsledky a podložiť ich dôkazmi.

7R: Pokiaľ ide o posudzovanie záverov, ťažko dokážem vylúčiť svoje osobné pocity.

8: Väčšinou dokážem urobiť jednoznačné rozhodnutia.

1.3. Rozpoznávanie súvislostí a objavovanie možností

9: Väčšinou viem rozpoznať v danej situácii opakujúce sa modely alebo súvislosti.

10R: Je pre mňa ťažké si predstaviť možné výsledky určitého plánu.

11: Viem prezentovať uskutočnené kroky, ktoré som použil od začiatku až po koniec riešenia úlohy.

12: Rýchlo dokážem odhaliť nové podmienky a navrhnúť nové nápady/riešenia týkajúce sa nových možností v danej situácii.

2. Otázky týkajúce sa riešenia problémov

V tejto oblasti sa hodnotí zručnosť „Riešenie problémov“. Táto oblasť pokrýva štyri časti, každý so štyrmi výrokmi. Cieľom je odhaliť schopnosť študentov definovať a rozpoznať problémy, ako

aj možné riešenia. Ďalej je zaujímavé zistiť, ako prijímajú rozhodnutia a kroky smerujúce k týmto riešeniam.

2.1. Definovanie a rozpoznanie problémov

17: Ak objavím problém, väčšinou ho preskúmam z rôznych hľadísk.

18R: Pri riešení problémov je pre mňa ťažké oddeliť dôležité od nepodstatných vecí.

19: Keď sa stretnem s nejakým problémom, zvyčajne ho najprv preskúmam.

20: Problém obyčajne rozdelím na menšie úlohy, ktoré postupne riešim.

2.2. Rozpoznanie možných riešení

21R: Keď riešim problém, mojou prvou myšlienkou je, že je to pre mňa príliš ťažké ho vyriešiť.

22: Obyčajne viem nájsť riešenie v ťažkej situácii.

23: Obyčajne viem nájsť niekoľko riešení daného problému.

24: Obyčajne dokážem uvažovať o možných riešeniach.

2.3. Robenie rozhodnutí a podniknutie krokov smerom k riešeniu

25: Keď natrafím na problém, obyčajne viem, čo mám okamžite robiť.

26R: Pokiaľ ide o prijímanie rozhodnutí, mám tendenciu váhať, ako konať.

27: Väčšinou sa snažím zapojiť do procesu riešenia problémov všetkých, ktorých sa to týka.

28: Väčšinou konám rýchlo a následne zvažujem dôsledky svojho rozhodnutia.

3. Otázky týkajúce sa riadenie vlastného procesu učenia sa

V tejto oblasti sa hodnotí zručnosť „Riadenie vlastného vzdelávacieho procesu“. Táto oblasť pokrýva štyri časti, každý so štyrmi výroky. Cieľom je odhaliť schopnosť študentov organizovať a hodnotiť svoj vzdelávací proces. Ďalej je zaujímavé zistiť, ako nájdú stratégie a možnosti odbornej prípravy a ako ich odhadujú a prispôsobujú vlastným cieľom.

3.1. Stratégia /tréning/ rozvrhnutie si času

33: Väčšinou rozvíjam stratégie a kroky, ktoré mi pomôžu pri sledovaní svojho procesu učenia sa.

34R: Učebnú látku sa učím tak, ako je uvedená, napríklad prečítam si ju niekoľkokrát.

35: Vo svojom vzdelávacom procese učenia sa, zvyčajne sa učím z viacerých zdrojov.

36: Väčšinou si naplánujem čas na učenie sa nových vecí.

3.2. Narábanie s informáciami (vedieť si poradiť s informáciami)



This project has been funded with support from the European Commission. This publication (communication) reflects the views only of the author, and the Commission cannot be held responsible for any use, which may be made of the information contained therein. Project number: 2018-1-HU01-KA201-047839

37: Väčšinou sa vedome zameriam na dôležité informácie.

38R: Nezamýšľam sa nad významom nových informácií, chcem sa ich len naučiť'.

39: Väčšinou si píšem poznámky alebo kreslím obrázky alebo diagramy, ktoré mi pomáhajú pochopiť čo sa učím.

40: Väčšinou interpretujem nové informácie vlastnými slovami.

3.3. Organizácia a hodnotenie vzdelávacieho procesu

41: Väčšinou plánujem, čo musím urobiť v danom čase.

42R: Nezamýšľam sa nad dôležitosťou jednotlivých úloh, riešim ich v takom poradí, ako ma napadnú.

43: Väčšinou zaraďujem svoje úlohy do jasných skupín alebo kategórií.

44: Väčšinou vyhodnotím náročnosť a prínos vzdelávacích aktivít.

ANNEX 2 - Learning skills assessment package

Guidelines to use the questionnaire

How to administer the questionnaire

The questionnaire consist of statements that are simple to mark on the 4 point agreement type scale. It is in word format, but can be administered online via a chosen platform. In the LELLE 2 project we used the UP's own Limesurvey server, but any survey service is good. The important condition is to have a clear understanding how the students answer the questions, so they should see the answer options all the time. The tool you use should be mobile-optimized, because the students prefer to use mobile phones.

If you do it on paper, you have to transfer the data into excel or other digital forms to make it easier to compute the results.

It is our experience that taking the survey in a controlled environment is better, for example, in a class, where the teacher can help answering the students questions and also control if they proceeding with the answers.

There survey is available in 5 languages, but you can translate it into yours as well.

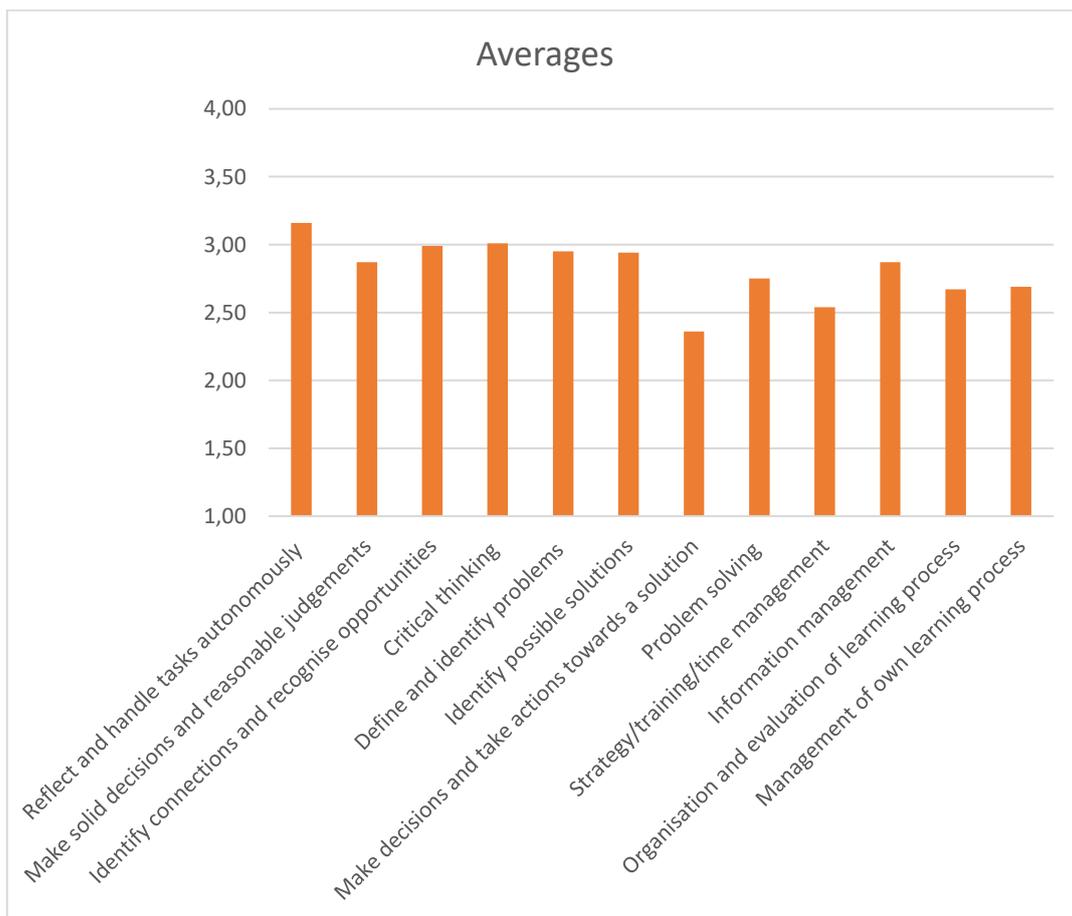
Calculating the results

There are three subskills in each competence. The scores are calculated in the way of averages. The student's answer's number (1-4, except for Reversed items, where the score have to be deducted from 5, so a given 1 will count as 4 and the other values switch respectively) serve as teh value given to that statement and the four statement's score's averages are the scores for the subskills.

After this step, the three subskill averages' average will give the competence score. This is a number between 1 and 4, the higher the better. If the score is above 3, the competence level is considered high, if it is between 2,5 and 3 it is good, if it is below 2,5 there is room for improvement. You can see the tables in our O3 report for examples. For example, if you had one group fillin out the questionnaire, you should have a result that looks like this:

Table of results												
	CT1	CT2	CT3	CT- SCORE	PS1	PS2	PS3	PS- SCORE	MOLP1	MOLP2	MOLP3	MOLP- SCORE
Averages	3,16	2,87	2,99	3,01	2,95	2,94	2,36	2,75	2,54	2,87	2,67	2,69

The three figures in bold are the competence scores for Critical Thinking, Problem Solving and Managing own Learning Path. On the Figure below, you can visualize the data and there are the subskills and competences detailed:





This project has been funded with support from the European Commission. This publication (communication) reflects the views only of the author, and the Commission cannot be held responsible for any use, which may be made of the information contained therein. Project number: 2018-1-HU01-KA201-047839

Using the data in practice

There are multiple ways of implementing the results in practice. One is what we used in the project to measure change, this way you have to have an input measurement at the beginning of the process and then when you finish the learning process you have to do an output measurement and compare the results.

You can also organize groups based on the results of students or give personal feedback on how they are performing. This way the teacher can also have some evidence on how the students can be split into groups for example or how the learning process is going.

Please consider that this is a self-evaluation questionnaire, so there is always some uncertainty on the validation.



This project has been funded with support from the European Commission. This publication (communication) reflects the views only of the author, and the Commission cannot be held responsible for any use, which may be made of the information contained therein. Project number: 2018-1-HU01-KA201-047839

ANNEX 3 – Survey data in separate database

ANNEX 4 – Data comparison of schools

TABLES

TEGA	CT1	CT2	CT3	CTSCORE	PS1	PS2	PS3	PSSCORE	MOLP1	MOLP2	MOLP3	MOLPSCORE
AVG RES1	2,90	2,82	2,81	2,84	2,87	2,82	2,38	2,69	2,52	2,82	2,65	2,66
AVG RES2	3,31	3,06	3,32	3,23	3,11	3,06	2,43	2,87	2,77	3,23	2,91	2,97
RES DIFF	0,41	0,23	0,51	0,38	0,24	0,24	0,05	0,18	0,25	0,41	0,26	0,31
AVG CTR1	3,35	2,88	3,05	3,09	3,07	3,12	2,63	2,94	2,73	2,88	2,83	2,82
AVG CTR2	2,83	3,00	3,17	3,00	2,83	3,42	2,92	3,06	2,67	2,92	2,58	2,72
CTR DIFF	-0,52	0,12	0,12	-0,09	-0,23	0,30	0,28	0,12	-0,07	0,03	-0,25	-0,09

MARIANUM	CT1	CT2	CT3	CTSCORE	PS1	PS2	PS3	PSSCORE	MOLP1	MOLP2	MOLP3	MOLPSCORE
AVG RES1	2,90	2,69	2,81	2,80	2,85	2,75	2,02	2,54	2,52	2,56	2,40	2,49
AVG RES2	3,46	2,92	3,25	3,21	3,13	3,33	2,00	2,82	3,04	3,21	3,46	3,24
RES DIFF	0,56	0,23	0,44	0,41	0,27	0,58	-0,02	0,28	0,52	0,65	1,06	0,74
AVG CTR1	3,29	2,79	3,08	3,05	2,97	2,91	2,14	2,67	2,53	2,99	2,74	2,75
AVG CTR2	3,24	2,90	3,10	3,08	2,98	2,89	2,29	2,72	2,58	2,96	2,86	2,80
CTR DIFF	-0,05	0,11	0,02	0,03	0,00	-0,01	0,15	0,05	0,04	-0,03	0,12	0,04



This project has been funded with support from the European Commission. This publication (communication) reflects the views only of the author, and the Commission cannot be held responsible for any use, which may be made of the information contained therein. Project number: 2018-1-HU01-KA201-047839

KURESSAARE	CT1	CT2	CT3	CTSCORE	PS1	PS2	PS3	PSSCORE	MOLP1	MOLP2	MOLP3	MOLPSCORE
AVG RES1	3,06	2,85	2,86	2,92	2,87	2,86	2,56	2,76	2,60	2,73	2,60	2,64
AVG RES2	3,14	2,83	2,95	2,97	2,89	2,96	2,56	2,80	2,56	2,75	2,60	2,64
RES DIFF	0,08	-0,02	0,10	0,05	0,02	0,10	0,00	0,04	-0,03	0,02	0,00	-0,01
AVG CTR1	3,06	2,76	2,84	2,89	2,82	2,86	2,51	2,73	2,53	2,69	2,53	2,58
AVG CTR2	3,04	2,79	2,89	2,91	2,87	2,86	2,45	2,73	2,61	2,70	2,48	2,60
CTR DIFF	-0,03	0,03	0,04	0,02	0,05	0,00	-0,05	0,00	0,09	0,02	-0,05	0,02

IBELA	CT1	CT2	CT3	CTSCORE	PS1	PS2	PS3	PSSCORE	MOLP1	MOLP2	MOLP3	MOLPSCORE
AVG RES1	3,40	3,03	3,21	3,21	3,07	3,19	2,38	2,88	2,50	2,95	2,67	2,71
AVG RES2	3,33	3,05	3,13	3,17	2,97	3,08	2,56	2,87	2,63	2,94	2,79	2,79
RES DIFF	-0,06	0,02	-0,08	-0,04	-0,10	-0,11	0,18	-0,01	0,13	-0,01	0,12	0,08
AVG CTR1	3,35	3,03	3,20	3,20	3,00	3,04	2,40	2,81	2,69	2,94	2,78	2,80
AVG CTR2	3,30	2,99	3,06	3,12	2,80	2,90	2,37	2,69	2,55	2,91	2,69	2,72
CTR DIFF	-0,05	-0,04	-0,14	-0,08	-0,20	-0,14	-0,03	-0,12	-0,14	-0,02	-0,09	-0,08

GRAPHS

