Results from the testing of methods developed under the project – feedback from Bulgaria, Finland, Latvia and Slovenia

The testing in Slovenia included 11 methods, tested by 7 teachers and 1 coordinator with 137 students.

Out of all the tested methods in Slovenia (Learning with VR – Slovenia; Learning apps in the classroom – Bulgaria; Padlet virtual wall – Finland; Self-learning through the network – Finland; Kahoot – Bulgaria; „I am" – Latvia; Quizlet for learning vocabulary – Bulgaria; Create interest about subject – Latvia; Team competitions – Bulgaria; SWOT analysis – Latvia; Cool concept – Finland), the one, which received the highest evaluation, was "Kahoot", because www.kahoot.com provides excellent opportunities for creating tests that students can do in the classroom as a competition or for homework. The students use their smartphones for the tests created with Kahoot. They can work individually or in teams. The method was evaluated during a geography class by 15 electrical engineers. Their comments as far as what they liked about the activity were: "everything, that we all worked together, we better learn, fun and interesting, that we were revising the subject together, we could use mobile phones, I liked it because we were able to compete with each other". As far as the other subjects in where the method would be recommended to be used in are concerned, the students mentions: in all subjects, English, Chemistry, as many subjects as possible, Chemistry, Mathematics.

The method with the lowest evaluation according to Slovenian students (23 computer technicians) was the "I am" method.

According to the teachers however, the proposed methods were indeed quite innovative, contemporary, fast, useful for developing different skills. The materials were accessible, the student were enabled to interact and be independent in their education. The methods use ICT.
The subjects, in which the Slovenian teachers used the methods, were mainly databases, English, ICT.
The majority of the methods needed no improvement according to the Slovenian teachers. Some needed a bit more content and other of the methods needed a more complex set of activities for senior students.
The teachers were unanimous that the students were more motivated to learn based on their use of the method.
All stated that they would recommend the method to colleagues teaching other subjects.
There is a vast variety of subjects, in which teachers can implement the methods into. One teacher basically states that the methods can be used in any subject, as long as the teacher is interested.
All stated that they will use the method they tested again.

When asked whether they need additional support for implementing methods of this kind, the majority said NO, but some mentioned that they would need some more IT support whether with new IT tools and internet connection or support from an IT teacher.

The testing in Latvia included 11 methods, tested by 4 teachers with 130 students.

Out of all the tested methods in Latvia (Authentic problem solving – Slovenia; The cross-curricular connection between the English language and the Information communication technology – Slovenia; The strategy on how to use a printed, monolingual (English-English) dictionary – Slovenia; My value shield – Latvia; Active learning method - „Explore Terminology" – Latvia; Smart Goal – Latvia; Group evaluation of customer service or sales of shops – Finland; Pools on current affairs – Finland; Tell a photo story using your smartphone in class – Bulgaria; Visual art and film in the classroom – Bulgaria; Whose memory is it?! – Bulgaria) "**Authentic problem solving**" and "**Pools on current affairs**" got the highest evaluation with 11 students in each method testing responding positively to the question whether they are motivated to learn.
"Pools on current affairs" got the following feedback from students: I liked to prepare questions for my classmates. It was something new; It was cool/good/super/interesting; It was interesting to watch other classmates how they are working.
"Authentic problem solving" was commented with "I liked this task, it was unusual; Everything was good; The task was difficult but interesting; The task was useful/creative," etc.

There were no methods, for which students unanimously stated that they were not motivating them to learn.

Almost all teachers gave a positive feedback to application on the methods. They would all rather recommend the methods to their colleagues teaching other subjects. All teachers would use the method again. Almost all teachers answered that students were more motivated based on their use of the method.

The testing in Finland included 12 methods, tested by 8 teachers and 1 coordinator with 120 students.

The 12 methods, which were tested are as follows: Running Dictation; Debate for and Against; Godparenting the Elderly; Associative Cards; Simulation Pedagogy; Story; Team Hangman; Ice-Breakers; Learns to Read; Cooperation with the Economy; Shield and the last one to be reported later: Peer Assessment in 3D Printing.
"Simulation pedagogy", "Learns to read", "Cooperation with the economy" and "Ice-breakers" got the best feedback from students, who tested the methods.
The students' feedback for simulation pedagogy was - "I liked it"; "It was different from normal lesson/other types of studying"; "You get to practice and act like in the real situation. Others can follow your work and tell you where there is need for improvement".
The feedback for ice-breakers was also very positive: "Very effective"; "I could think deeply"; "I liked to discuss each other and get to know people better", etc.

"Learns to read" was also very well taken by the students. They praised the method and said it was good for learning and analyzing, even if a bit easy.
The same goes for cooperation with the economy, which got 8 positive answers for being motivating to learn and providing useful knowledge.
The feedback from the teachers is really valuable and they give specific concerning the implementation of each separate method they tested in the national report. Here again all teachers stated that they indeed would use the methods again and they would recommend them to other colleagues.

The testing in Bulgaria included 12 methods, tested by 14 teachers with 270 students.

The 12 methods that were tested in Bulgaria were: "The end of word", "Positive attitude towards subject", "Bingo", "Business knowledge through Restaurant Day", "Finding and delivering information in groups", "Getting motivated through promotion", "Learning by using innovative computer applications", "How to properly dispose the waste", "Learning with VR (Video Reality)", "Cooperation with the economy", "Peripatetics revisited", "Circle stories – creative writing". The results from the testing of the methods with students show that they enjoyed all methods a lot. All methods were considered quite motivating for students (with students answering yes to that question between 60 and 90% of participants). The method that received less positive answers with regard to motivation was "Finding and delivering information in groups". The teacher suggestion for that method was to improve it by forming new groups for discussion after the initial discussion was held, so that all students have all the information in the particular topic. Among the positive aspects of the tested methods students shared creativity, practical learning, fun and learning by doing. Among the negative comments from students there were such sayings that "it depends on the group you are involved in when testing the method, with some groups it is awful to work" (about method "Learning by using innovative computer applications") and also "it requires too much thinking" (method "Positive attitude towards subject").
With regard to teachers' feedback about the tested methods we can say that their comments were quite positive and that they would use the methods gladly in their everyday practice. The main comments per method are given below:

- "Positive attitude towards subject": the method to be used for shorter time and more often.
- "Circle stories – creative writing": the method to be used with smaller groups.
- "Peripatetics revisited": the technical preparation for the implementation of the method is quite challenging.
- "Bingo" – it would be helpful if it is developed for more topics that teachers can use.
- "Learning with VR (Video Reality)" – students were highly motivated and really appreciated participating in the activities.
- For the other methods: "The end of word", "Business knowledge through Restaurant Day", "Finding and delivering information in groups", "Getting motivated through promotion", "Learning by using innovative computer applications", "How to properly dispose the waste" and "Cooperation with the economy" teachers were quite laconic saying the method worked well, and they wouldn't change anything in it.

Conclusions

Teachers to carefully consider the lesson where the method is tested (for example it is not good to test the method in Chemistry if the method is marked useful in upbringing lesson).
Work with students to reply truthfully in the feedback they give for the methods testing.
Time –when methods are tested; it is not good to make testing at the end of the lesson when all students are willing to faster to finish the test and leave a class.
The students are different, each student has their own strong side and weak side– some of them like photo story, making photos and some of them like calculation of traveling costs.
When forming groups the teacher should take into account the aspects of how students work together (on the one hand to form groups in which people can work in such a way that all of them take something from the activity – not to have only one person doing everything and the others just agree).
The methods and the student prerequisites were very different from each other. The general opinion on the methods tested is that all of them can be very motivational and supportive of learning. Implementation must be carefully prepared and the student group identified suitable for running the activity.