2nd workshop – PBL, online quizzes and logical tasks

The second of three GLAT workshops entitled "PBL, online quizzes and logical tasks" was held at the University of Rijeka, Department of Informatics on 28th and 29th of August 2018. The workshop was attended by the focus group of junior grade teachers from primary schools in Rijeka.

The goal of the second workshop was to introduce the participants to the concepts and examples of Problem Based Learning (PBL), logical tasks and online quizzes as well as with tools for creating logical tasks and online quizzes.

The main learning outcomes of the workshop were:

- describe principles of Problem Based Learning,
- use Web 2.0 tools for creating logical tasks and online quizzes,
- apply digital didactic games in different school subjects,
- create learning scenarios in order to develop innovative ideas for carrying out logical tasks and online quizzes.

In the introductory session the leader of the GLAT project Nataša Hoić-Božić (University of Rijeka, Department of Informatics) and Jasminka Mezak (Faculty of Teacher Education) welcomed the workshop participants, gave overview of the 1st workshop and presented the main information about the 2nd workshop. After that the teachers from the focus group attended lectures, demonstrations and participated in practical work sessions.

In the first session, Mart Laanpere and James Sunney Quaicoe (Tallinn University) introduced the concept of PBL and presented examples of learning scenarios illustrating scaffolding and fading in coding lessons. Teachers also had a group task to design a PBL scenario with coding problems.

Daniela Tuparova (South-West University Neofit Rilski) held a presentation about logical tasks and quizzes in classroom in the second session. She pointed out examples of logical tasks and quizzes providing propaedeutic for algorithms and programming. During the group work, participants were exploring examples and resources for different school subjects.

In the third session, Jasminka Mezak (Faculty of Teacher Education) introduced participants to advantages of using Web 2.0 tools for creating quizzes and logical tasks. They had a chance to explore examples and resources and create examples of quizzes and logical tasks for different school subjects using the following tools: Kahoot, Wizer, Match the memory.

1st workshop follow-up activities

After the first GLAT workshop, the teachers from focus group created learning scenarios with innovative ideas to carry out game-based learning and unplugged activities. They were able to decide independently which subject and lesson to choose.

During the learning scenario development, online mentoring of experts from partner organizations was provided within the e-course in the LMS. The teachers also implemented the designed scenarios in classes with their students and shared their experiences in the LMS.

The following three scenarios were chosen, translated into English, and published on GLAT website:

1. *Rhythmic and dance structures,* Physical Education (4th grade).

2. *Playing and revising about the traffic,* Nature and Society/Homeroom class (2nd grade).

3. *Addition and subtraction to 20,* Mathematics (1st grade).

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Games for Learning Algorithmic Thinking

The second day of the workshop started with the session entitled "Games in lessons". Ana Madevska Bogdanova, Katerina Zdravkova and Vladimir Trajkovik (Ss. Cyril and Methodius University in Skopje) held presentations about digital tools within the process of problem solving, role-playing and knowledge gathering, and integration of games into lecturing process. The lecturers demonstrated how to use problem solving, role-playing and knowledge gathering in logical games and how to find an appropriate place for games in the lessons. During the group work, the teachers were exploring and analysing existing games.

Sequence of shapes
Which bracelet matches the sequence?

Picture Sudoku
Which table represents picture Sudoku?

During the last workshop session, the participants started with the development of their own learning scenarios with the help of all lecturers. Their task was to apply newly acquired knowledge and design a learning scenario containing quizzes and logical tasks in order to encourage creativity, logical thinking, and problem-solving skills. Teachers could choose any school subject and lesson within the subject. They used the prepared template for learning scenario development and the tool LePlanner for visualising learning scenarios.

At the end of the workshop, teachers participated in the survey that was conducted in order to determine their level satisfaction with the presented topics and applied teaching and learning methods.

After the end of the workshop, teachers will continue to work on their scenarios. They will use the Moodle MoD LMS and consult with experts from project team who will mentor the development of scenarios. Teachers will implement their scenarios in classrooms with their students and share their experiences with other participants. Developed learning scenarios will be one of the results of the GLAT project. Outstanding scenarios will be translated into English and, together with workshop syllabus and learning materials, available for use to all interested parties in Croatia and beyond.

The third GLAT workshop "Games and Tools for Programming" will be held on 9th and 10th of January 2019.