



GAMMA is the acronym of the project *GAME-based learning in Mathematics*, which is a three-year Erasmus+ project, started on 1 October 2020.

The Multiplier Events

During April and May there were several Multiplier Events in partner countries, described below, with the main purpose of the promotion of the GAMMA project. As the main aims of all those dissemination events, we can highlight the introduction of the participants to the GBL (Game-Based Learning) founded on digital technology and their training to use the developed GAMMA intellectual outputs. In general, at all those dissemination events the participants were also trained to produce their teaching materials related to the project outputs and encouraged to use the GAMMA games and teaching scenarios in their lessons.

Multiplier Event in Rab, Croatia

It took place on April 29, 2023, at the high school on the island of Rab. Members of the GAMMA team of the High school Markantun de Dominis Rab organized the event, with the guest lecturer from the coordinating organization Department of



Mathematics of the J. J. Strossmayer University of Osijek, Croatia (MATHOS). A total of 30 high school and elementary school mathematics teachers, as well as participants from other STEM subjects and a few school principals from various schools in Croatia took part in the event.

An interesting and valuable programme included a presentation of the GAMMA project and GAM-

MA intellectual outputs, a workshop on the developed GAMMA games and teaching scenarios, and training for creating own games using the ChoiCo authoring system for the production of digital games. The event also included discussions about experiences from the piloting and presentation of the tips important for implementing educational games in the classroom. Participants were introduced to the possibility of creating their own scenarios based on the developed GAMMA template for teaching scenarios. The teachers were also motivated to use GAMMA games and teaching scenarios in their classes.

Multiplier Event in Pori, Finland

It was held on May 9, 2023, at Pori Upper Secondary School. The teachers of Pori Upper Secondary School in cooperation with Satakunta University of Applied Sciences organized the event. Although only several participants took part in the event, it



was very successful, as there were interested teachers from all over Finland so the links to the games were sent to them electronically.

The event included a presentation of the countries involved in the GAMMA project and all the outputs of the project: seven games, Handbook for Teachers, ChoiCo and MaLT2 manual and videos and Teaching Scenarios. Participants were introduced to the idea of GBL, and how it can be used in teaching, and encouraged to explore and develop the games and outputs of the project further, either by themselves or with students.



The main focus of the event was on presenting and playing games, in which way, the games will be made available to local young people in different schools.

Multiplier Event in Osijek, Croatia

It took place on May 06, 2023, at the Electrotechnical and Traffic School Osijek (ELPROS) in Osijek. The event was organized by members of the GAMMA ELPROS team, with two guest lecturers from the MATHOS coordinating organization and two guest lecturers from the ETTA. The participants of the meeting were 33 mathematics teachers from high schools and elementary schools.



The agenda of the event included lectures on the GAMMA Handbook for teachers and the GAMMA template for teaching scenarios, a short report on a case study, an introduction to the MaLT2 authoring system, and training on how one can create their own games using the ChoiCo authoring system for producing digital games. The project team members held workshops on the GAMMA games and the teaching scenarios created in the project.

Multiplier Event in Athens, Greece

It took place on May 16, 2023, at the First High School of Peristeri Athens. The event was organized by members of the GAMMA team of the school. The participants of the meeting were 33 high school and secondary school mathematics teachers, as well as teachers from other STEM subjects from the public and private sector from the area of Peristeri and Chaidari which are sub-

urbs of Athens. A worthwhile programme of the



event included two workshops on games and teaching scenarios, training for creating games using the ChoiCo authoring system for digital game production, and discussions about experiences from the piloting. Several of the participants were particularly interested in the application of the training scenarios as they are already trying to implement similar techniques and they found the training tools produced by the project particularly useful.

Multiplier Event in Amsterdam, The Netherlands

The meeting was organized on 31 May 2023 by members of the GAMMA AUAS (Amsterdam University of Applied Sciences) team and it was held in the Kohnstammhuis building of the University. Fifteen Mathematics teachers from secondary schools from several places in the Netherlands participated in the meeting.





The meeting activities were directed to increase teachers' awareness about the pedagogical possibilities of digital GBL for learning mathematics and to increase teachers' interest in using it. The main intellectual outputs of the GAMMA project were briefly presented: the Handbook for teachers, the seven games and the eight teaching scenarios, including more details about scenarios, such as a concrete example of the scenario and a detailed explanation of specific pedagogical moves in GBL such as pre-game, tutoring gameplay, and debriefing. Participants also explored the games themselves. Like other Multiplier events, this one was also very successful.

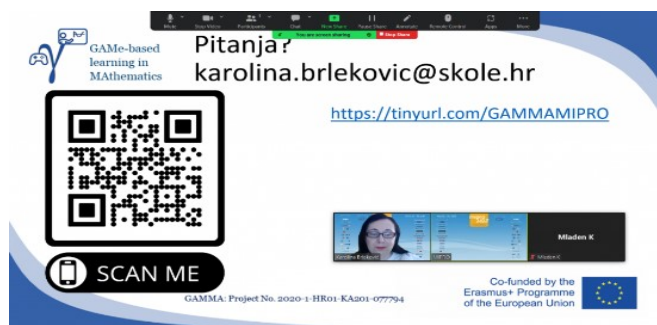
To conclude, let us mention that the participants found the meetings useful and interesting and they agreed that those events increased their knowledge about GBL and what is very important to point out; they intend to share it with their colleagues.

Other GAMMA dissemination activities

SAMK (Satakunta University of Applied Sciences, Faculty of Technology, Finland) team member M. Leino presented the GAMMA project during the Technology in Teaching training day for teachers at the RoboAI week. It was held in April 2023, in Pori (Finland).

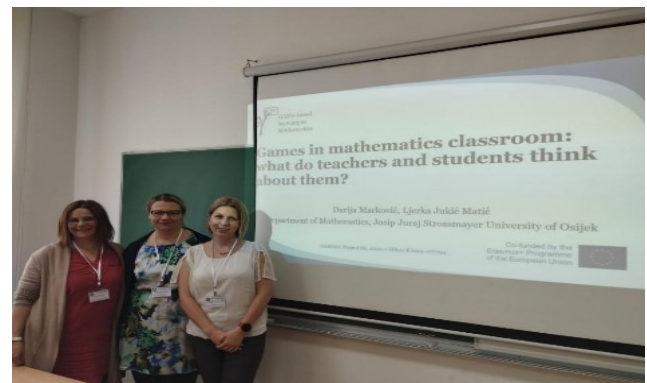


The project results were presented at the MIPRO 2023 Convention – ICT for a Smart and Green Pre-



sent and Future, in May 2023 in Opatija (Croatia). Precisely, the ELPROS team members K. Brleković and D. Ivanović-Ižaković gave the lecture entitled *Project GAMMA: playing or learning?*

Furthermore, the project and project results were presented at the International Scientific Colloquium Mathematics and Children in May 2023, in Osijek (Croatia). MATHOS team members Lj. Jukić Matić and M. Jukić Bokun gave the lecture GAME-based learning in MATHematics, while the presentation entitled *Games in the mathematics classroom: What do teachers and students think about them?* was given by MATHOS team member D. Marković.



Announcement of the Next Activities

The final GAMMA conference in Croatia will take place in Osijek on August 31st. The event will be organized by members of the GAMMA MATHOS team. More details about conference can be found here: <https://www.facebook.com/people/GAME-based-learning-in-Mathematics-GAMMA/100063862788148/>

Also, final Transnational Project Meeting would be organized for all project members in Rab (Croatia) in September, 2023.

Keep Our Project Progress on Track

All information, news, activities, and, project outputs, when prepared, will be freely available on the project website: <http://www.project-gamma.eu>.

Follow us also on Facebook: <https://www.facebook.com/GAME-based-learning-inMathematics-GAMMA-104353051638>

