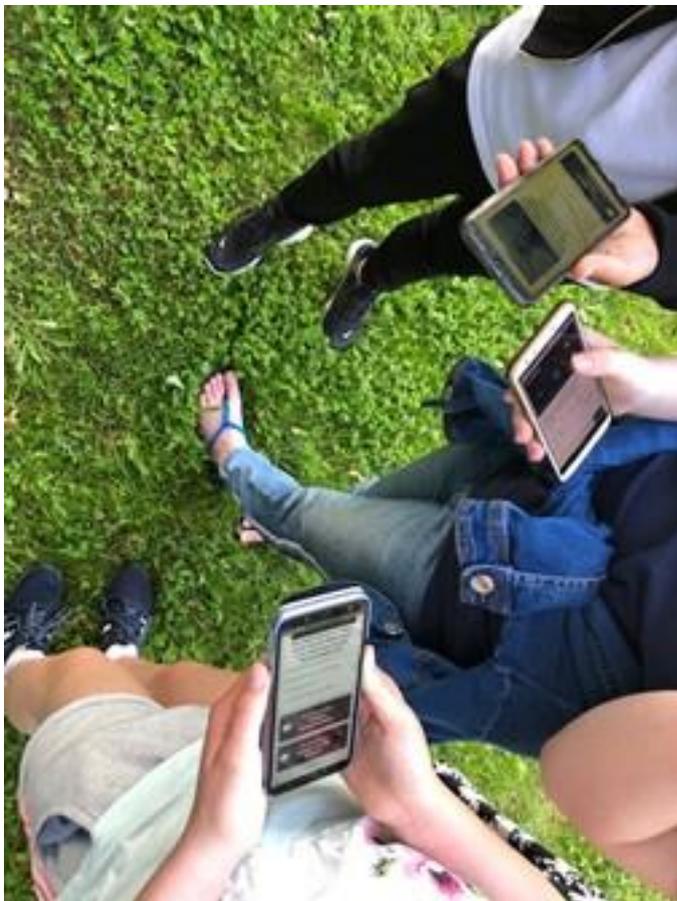


Using mobile augmented reality games to develop key competences

30 November 2021

Games that augment the physical world by embedding them with digital data. That is the goal of UMARG - Using Mobile Augmented Reality Games to develop key competences through learning about sustainable development, an Erasmus+ project carried out by ScienceLinX and the Institute for Science Education and Communication has been completed. The project brought together partners from Romania, Greece, Cyprus and the Netherlands.



An everyday object...

The purpose of [the UMARG project](#) was to design, implement, and evaluation the impact of a set of curriculum materials on students' development of digital and civic competences through learning about sustainable development. The project responds to the UN 2030 agenda for sustainable development, which includes goals and targets around the three dimensions of sustainable development: the economic, social and environmental.

Fictional layer

Mobile Augmented Reality Games are games played in the real world with the support of digital devices (PDAs, smartphones) that create a fictional layer on top of the real-world context. Hence, instead of putting people in an artificial world, these games augment the physical world by embedding them with digital data, networking and communication abilities.



...and the digital information that accompanies it. | Photo's UMARG/University of Groningen

To showcase the project's deliverables, a multiplier hybrid event was held in Groningen on November 25 with forty participants, including researchers, curriculum designers and teachers. The event included presentations about the use of augmented reality in education, the design of curriculum materials with the use of digital tools and open source platforms like Tale Blazer, as well as examples from the implementation of the games in school classrooms.

Deliverables

The deliverables of the project are freely available in English, Greek, Romanian and Dutch on [the project's website](#):

- An augmented reality teaching toolkit for secondary schools which includes 30 MARGs
- A learning design framework and related curriculum materials
- A research study that reports on the impact of the implementation of the curriculum materials on students' development of civic and digital competences
- A MOOC which includes four modules and offers professional training for teachers:
 - Module 1: Fostering digital and civic competences in the context of sustainable development
 - Module 2: Introduction to augmented reality technology
 - Module 3: Designing, developing and incorporating Mobile Augmented Reality Games in teachers' activity to increase students' digital and civic key competencies
 - Module 4: Designing learning scenarios for MARG

For more information on the project please [check the UMARG website](#).

If you are school or university teacher and are interested in using the deliverables of the project please contact the local [project coordinator Lucy Avraamidou](#).