



Key Action 2
„Robotics ON” Strategic Partnership



Newsletter no 5

Project reference number: 2017-1-RO01-KA201-037335

„Robotics ON” Project

Strategic Partnership supporting innovation
Erasmus + Programme, Key Action 2
01.11.2017 - 31.10.2019

NEWSLETTER NO 5

May 2019

*Newsletter produced with the financial support of the European Commission.
The content of this material is the exclusive responsibility of the authors, and the National Agency and the European Commission are not responsible for how the content of the information will be used.*



PARTNERS:

P1. Colegiul Național "Constantin Carabella"

Târgoviște, **ROMANIA**

website: www.carabella.ro

P2. Anyksciu Jono Biliuno gimnazija

Anykščiai, **LITHUANIA**

website: www.bilngimn.lt

P3. Budapesti Gépészeti Szakképzési Centrum Szily Kálmán Műszaki Szakgimnáziuma, Szakközépiskolája és Kollégiuma

Budapest, **HUNGARY**

website: <http://www.szily.hu>

P4. Istituto Istruzione Superiore A.Volta

Frosinone, **ITALY**

website: www.voltafr.gov.it

P5. S.C. SKA NET SRL

Bucharest, **ROMANIA**

website: www.itadviser.ro

P6. IMPLEMENT 24SOFTWARE SRL

Bucharest, **ROMANIA**

website: www.24software.ro

TARGET GROUP:

84 students (15-18 years old), 21 from each school, students interested in personal development, using ICT in the design and creation of robots, activities that will stimulate and increase the chances of employment at the right time.

OBJECTIVES:

1. Developing digital and entrepreneurial skills relevant to personal development and career.
2. Increasing the autonomy in terms of personal and professional development of the 84 students in Robotics Clubs, at least 32 of them competitive in programming / robotics.
3. Developing the capabilities to adapt, promote and exploit digital technologies by creating a robot, in each partner school, which solves a problem identified at school level.

PROJECT ACTIVITIES DECEMBER 2018-APRIL 2019

ROBOTICS CLUBS ACTIVITIES

DESCRIPTION CLUBS:

In each school the Robotic Club has 21 students. Each club has a committee board, which consist of: a coordinator, a secretary, a PR responsible. The activities of the Robotics Club were developed in each school, according to the schedule established by the Robotics Club board and the coordinating teacher.

The Robotics Club activities took place within the school, after classes. In each school, after each training session, the students worked together in the robotics clubs, they were peer-counsellors, digital resource makers, autonomously using their achievements, identifying institutional needs and solutions to them. Under the guidance of coordinating teachers, the students have identified and distributed roles and responsibilities, developed and promoted ideas as well as projects for their school / community, and created their own robot to solve a problem identified by themselves. As a partnership project supporting innovation, during the 24 months of implementation (01.11.2017-31.10.2019), two intellectual products will be developed, tested and improved: the Robotics ON curriculum, structured on the four training modules and the e-learning platform.



ROBOTICS CLUBS ACTIVITIES

Abilities developed in Romania(C1): The students learnt how to develop their abilities, how to work in teams and how to manage a system project.



The workshops that took place were: System Project Design Overview, System Project Planning Matrix, Logic Structure, Project Planning Overview, Activity Planning Network Analysis, Resource Planning & Budgeting Overview Cost Management, Budgeting; Work Breakdown Structure (WBS), Risk Management Lifecycle, Stakeholder Overview, Stakeholder Analysis; System Project Management Implementation Overview, Implementation Tracking.;Monitoring Implementation Activities, Evaluation, SWOT Analysis.

Abilities developed in Lithuania(C2):The meeting was primarily devoted to learning activities aimed at increasing the students’ ability to think critically as one of the most significant skills that can be used throughout the whole process of building a robot to solve an existing problem. Overall, the meeting in Lithuania brought together students, teachers and trainers having different cultural, economic, social and educational background and gave them the possibility to understand, work and respect each other and adapt to future learning or working in European contexts.



After the teammates had returned from C2, they started dissemination classes. They also gave a summary of the courses they took part in, thought about the “Creative problem solving” course and learnt how to integrate the emotions into the creative process.

The students that took part in C2 shared with the other students the experience and the knowledge that they have acquired during the “Critical thinking and Emotions” course. They taught their peers how to control the emotions so that they are beneficial to our creative and critical thinking process and not allow them to affect the students in a negative way.



The students presents RACI course to other teachers, visitors in the club’s activity.



Abilities developed in Hungary(C3): The students started to learn the basics of LEGO Mindstorme EV3. It was hard at first but everything turned out very well. The students started to program the robot to go straight, taught him basic turns, used the color sensor and the touch sensor, made him play music and show all sorts of funny images.



The students participating in C3 undertook **peer-counselling activities** to share with their colleagues the C3 experience. In this regard, the students used the theoretical support of O1_ Module 1: Communication, Coordination, Teamwork related to System Project management, O1_ Module 2: Critical Thinking, creative problem solving and O1_ Module3: Programming, also they used the ppt for dissemination C3 activities (acquisitions, lessons learned and photos taken during the learning activities in Budapest).

The transnational learning activities have been coordinated by experienced trainers from private partner companies, connected to the business environment, IT market challenges and needs. They collaborated with the teachers from the four partner schools to develop the two intellectual products: Robotics-ON curriculum and e-learning platform roboticon.eu. Their structure is modular so it is very easy to be used by all those interested in the following areas:

- communication, coordination, teamwork related to system project management
- critical thinking, creative problem solving
- computer programming
- robotics coding and driving



The activities helped the students to develop key competences such as: linguistic, technological, digital, entrepreneurial and social.

OTHER ACTIVITIES

Ever since the “RoboticsON” project started, the interest in robotics has spiked up across our school. Since then, 2 robotics teams have been established in our school: one for highschool students and the other one for middle school students. The older students started teaching the younger ones about programming.



The experience gained in the transnational learning and peer-counselling activities within the Senior Club, has been capitalized in various interdisciplinary curricular and extracurricular activities.





The highschool team, “Under Construction”, took on the challenge of participating in the “First Tech Challenge” competition. They won the second place for desing and the first place for connection in the regionals and went straight for the nationals.





After these events, the Romanian team visited schools in the town. They talked to the middle school students in our town about robots and programming. They were all very excited and eager to learn. Many of them said they would like to join our team once they begin highschool.



The team also presented the robot in various institutions (The Town Hall, The Local Council, The School Inspectorate, The Children's Clubs).



Key Action 2 „Robotics ON” Strategic Partnership



Newsletter no 5

Achievements

- An easy-to-use online user-friendly website available at <http://robotics.carabella.ro/>

The screenshot shows the homepage of the Robotics ON website. At the top left is the Robotics ON logo, and to its right are navigation links: Acasă, Lecții, Exerciții, and Provocări. On the top right are links for Logare and Înscriere. The main heading is "Bine ați venit!" (Welcome!) with a subtext: "Pagina clubului nostru este locul ideal pentru inițierea dvs în robotică!" (Our club page is the ideal place for your introduction to robotics!). Below this are two buttons: "Detalii" (Details) and "Logare" (Log in). To the right is a stylized robot illustration. Below the main content are three feature boxes: "Învăță" (Learn) with the text "Ești dornic de a învăța? Aici ai ocazia să te inițiezi în domeniul roboticii alături de alți elevi pasionați!" (Are you eager to learn? Here you have the chance to introduce yourself to the field of robotics along with other passionate students!); "Exersează" (Practice) with the text "Crezi că știi destul? Poți testa acest lucru încercând chestionarele noastre! Nu-ți face griji, le poți relua de fiecare dată când greșești!" (Do you think you know enough? You can test this by trying our questionnaires! Don't worry, you can retake them every time you make a mistake!); and "Obține experiență" (Gain experience) with the text "Te simți pregătit pentru a fi în topul celor mai buni? Răspunde provocărilor noastre și obține puncte de experiență!" (Do you feel ready to be among the best? Answer our challenges and gain experience points!).

- Materials on the project website: <https://roboticson.eu/courses-overview/>

The screenshot shows the "Courses Overview" page on the Robotics ON website. The URL in the browser is https://roboticson.eu. The page features the Robotics ON logo and navigation links: Home, E-learning, Register, and Login. The main heading is "Robotics ON". Below the heading is a paragraph: "Using the opportunity offered by the Erasmus+ program, Key Action 2, the Robotics ON strategic partnership project, provides students with the opportunity to develop their STEM skills and become science and technology leaders." To the right of the text is a graphic illustration of a network of screens and a gear, symbolizing technology and learning.

The students practiced the tests and exercises on the site and studied and deepened the lessons available on this platform.



Key Action 2 „Robotics ON” Strategic Partnership



Newsletter no 5

The screenshot shows the Robotics ON website home page. At the top, there is a navigation bar with the logo on the left and links for 'Acasă', 'Lecții', 'Exerciții', and 'Provocări' in the center, and 'Logare' on the right. The main content area features three white boxes, each representing a chapter and a lesson:

- Capitolul 1**
Lecția 1 - Blocul de acțiuni (mișcarea robotului)
[Începe](#)
- Capitolul 1**
Lecția 2 - Blocul de acțiuni (display, sunet)
[Începe](#)
- Capitolul 2**
Lecția 1 - Structuri repetitive (flow control)
[Începe](#)

The screenshot shows two multiple-choice questions on the Robotics ON website. The navigation bar is the same as in the previous screenshot. The questions are:

1 - Câte ramuri are funcția Switch?

- A) 2
- B) 1
- C) 3
- D) 0

2 - Putem folosi senzorii în cadrul unei structuri repetitive?

- A) Depinde de situație
- B) Poate
- C) Da
- D) Nu



Key Action 2 „Robotics ON” Strategic Partnership



Newsletter no 5

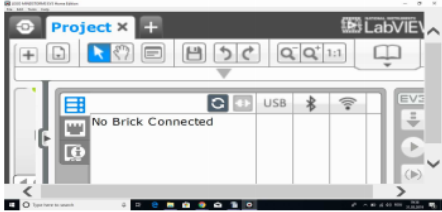
Microsoft Word - lectia-1.doc 1 / 6

Acasă Leții Exerciții Provocări Loga

CAP 1.LECȚIA 1

BLOCUL DE ACȚIUNI-Mișcarea robotului

Pentru a începe programarea propriu-zisă a robotului acesați butonul de shortcut din stânga-sus a ecranului, pe care apare semnul "+"



După ce am deschis proiectul (o nouă pagină goală), ne vom îndrepta atenția către partea de jos a ecranului, unde vom observa o fâșie cu mai multe culori (fiecare dintre ele reprezentând câte un grup de butoane). Fiecare grup de butoane conține mai multe blocuri cu diverse denumiri.

Teodora Popa, Partnership Coordinator
Mihaela Gabor, P1 Public Relation Responsible

*Newsletter produced with the financial support of the European Commission.
The content of this material is the exclusive responsibility of the authors, and the National Agency and the European Commission are not responsible for how the content of the information will be used*



Key Action 2
„Robotics ON” Strategic Partnership

Newsletter no 5



Erasmus+