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„Robotics ON" Project

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

NEWSLETTER NO 5

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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 în Lituania(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, thaught 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 stardted to learn yhe basics of LEGO Mindstorme EV3. It was hurd at first but everything turned out very well. The students started to programm 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 roboticson.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 s helped the students to developed key competences such as: linguistic, tehnological, 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, haa been capitalized in various interdisciplinary curricular and extracurricular activities.

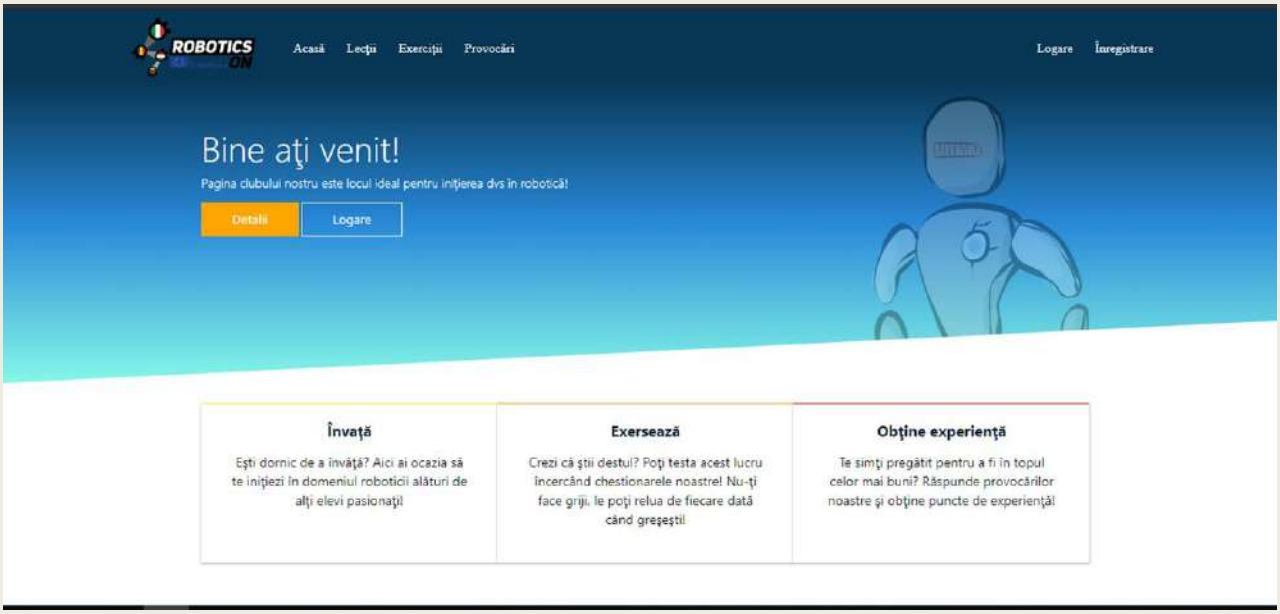
The highschool team, "Under Construction", took on the challenge of participating in the "First Tech Challenge" competition. They won the second place for desing and the first place for connection in the regionals and went straight for the nationals.

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 mould like to join our team once they begin highschool.

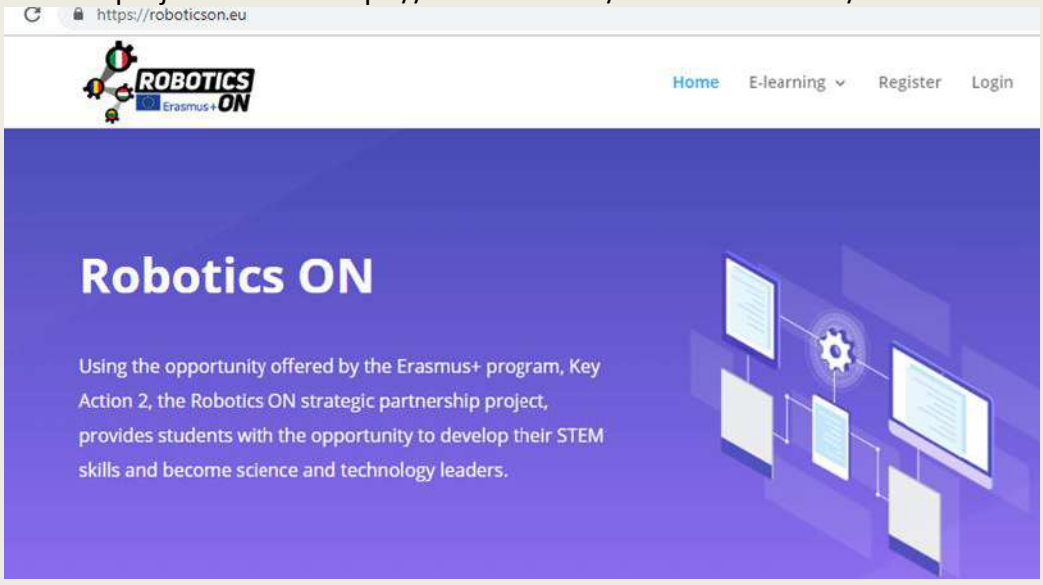
The team also presented the robot in various institutions (The Town Hall, The Local Council, The School Inspectorate, The Children's Clubs).

Achievements

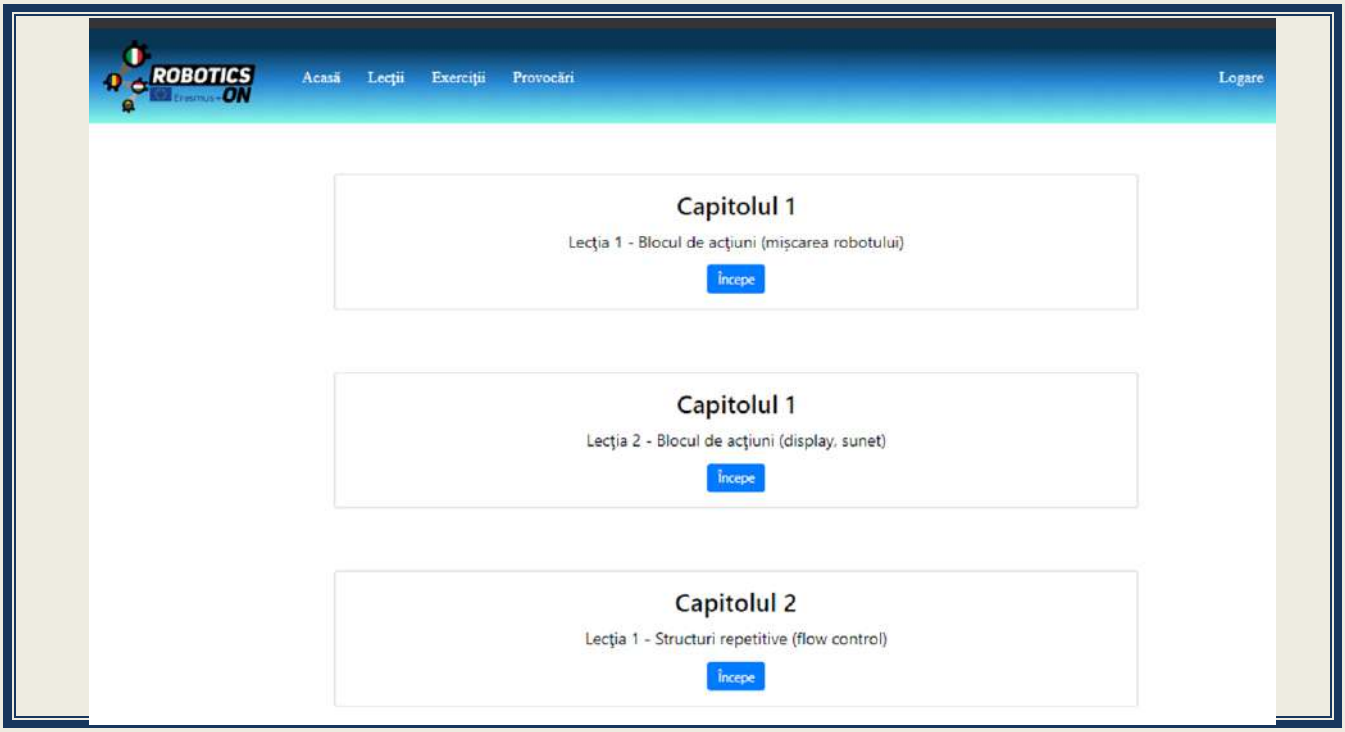
- An easy-to-use online user-friendly website available at http://robotics.carabella.ro/

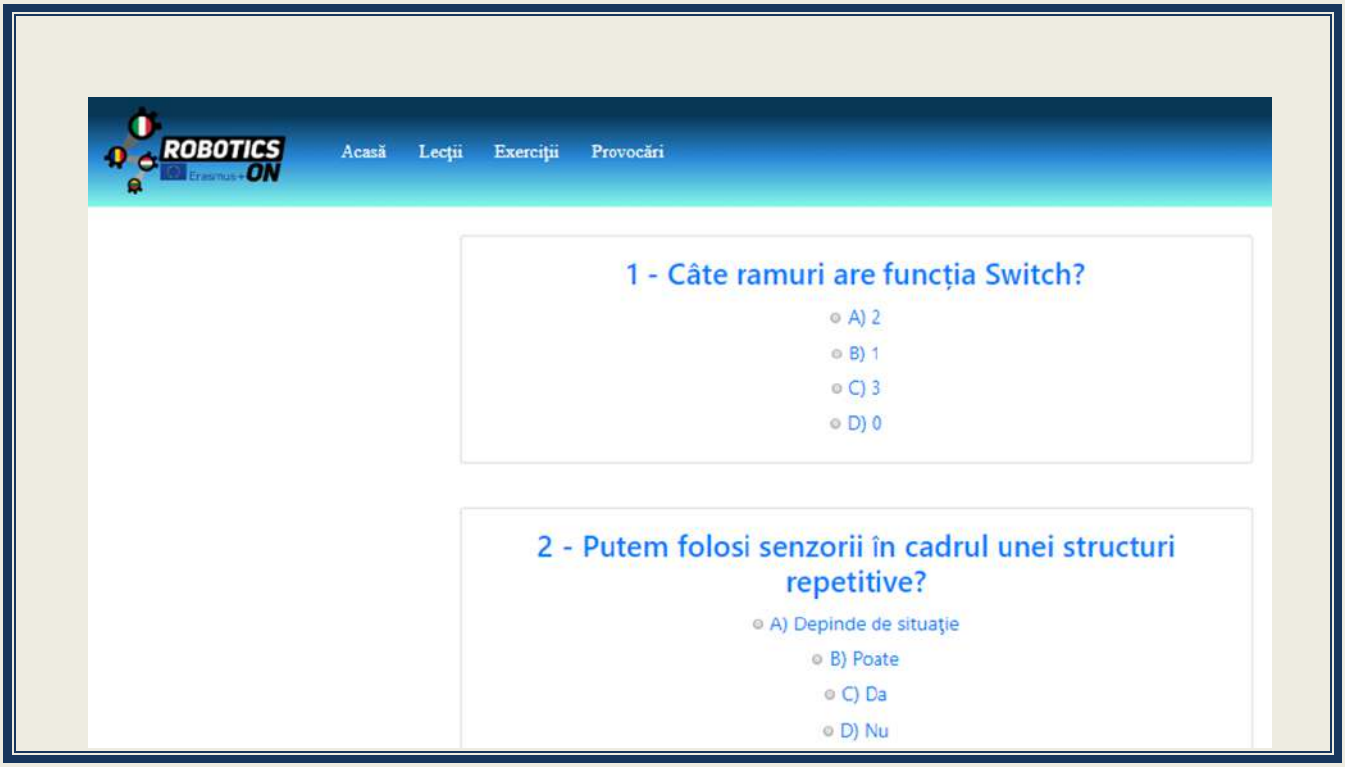


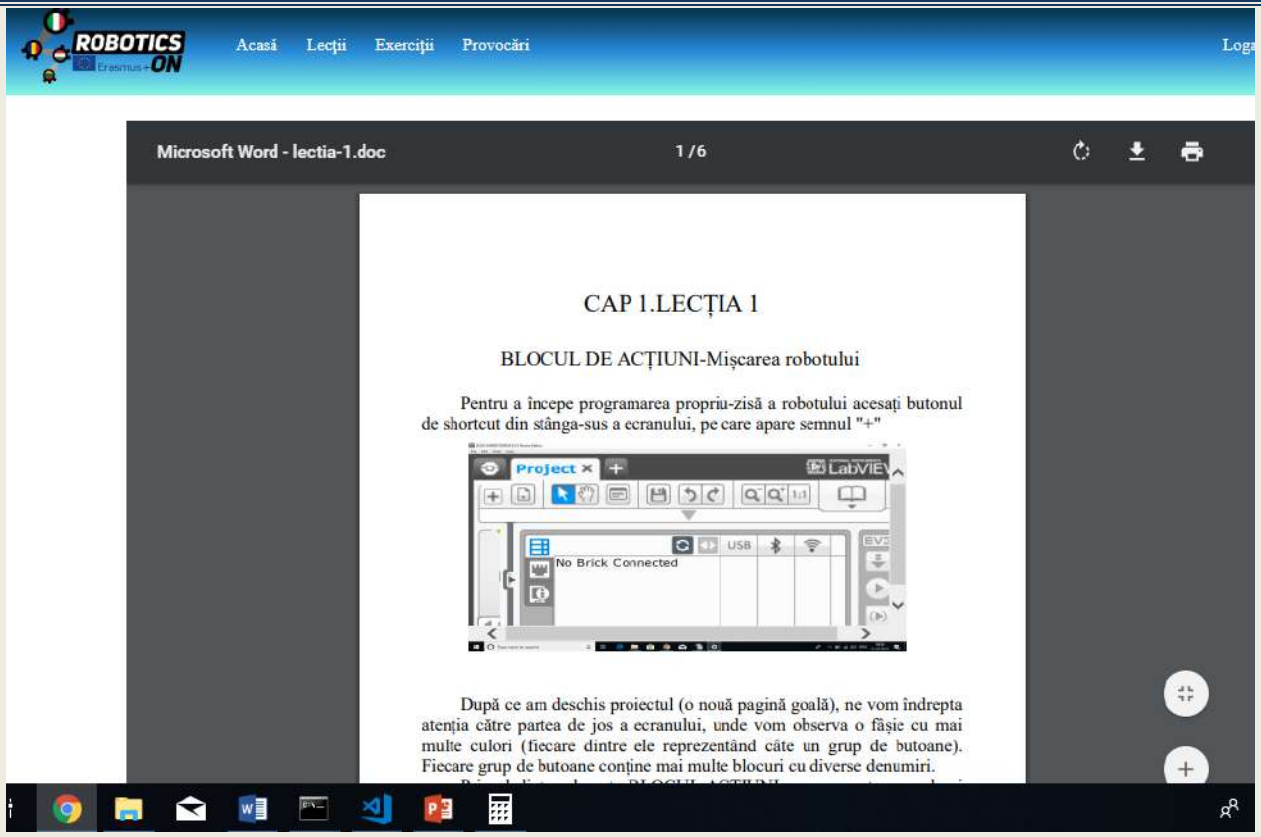
- Materials on the project website:https://roboticson.eu/courses-overview/



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


ROBOTICS ON
Acasă
Lecţii
Exerciţii
Provocări
Logare
Capitolul 1
Lecţia 1 - Blocul de acţiuni (mişcarea robotului)
Începe
Capitolul 1
Lecţia 2 - Blocul de acţiuni (display, sunet)
Începe
Capitolul 2
Lecţia 1 - Structuri repetitive (flow control)
Începe


ROBOTICS ON
Acasă
Lecţii
Exerciţii
Provocări
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 situaţie
B) Poate
C) Da
D) Nu



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