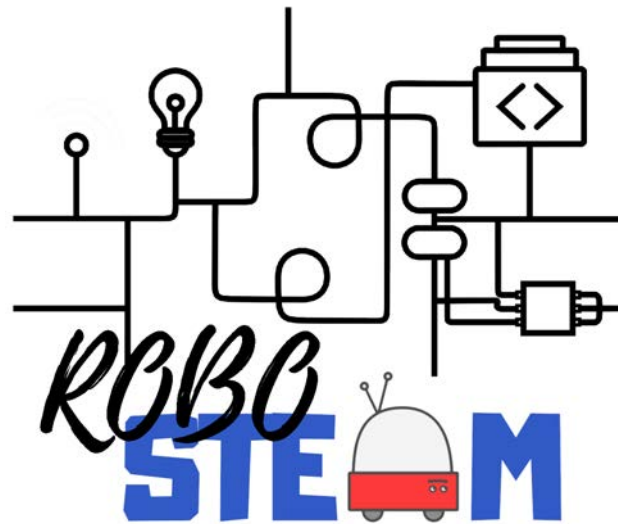


E5. RoboSTEAM Local Multiplier Event - Germany



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Version History

Version	Date	Comments
0.1	30/03/2020	First Draft after finishing the event
0.2	31/03/2020	Compiled signatures and contents
1.0	29/05/2021	Format and data corrections

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1. E5. Local Multiplier Event - Germany

This document describes RoboSTEAM hackathon Multiplier Event carried out in Karlsruhe in the context of RoboSTEAM project [1-8], on the 30th of March of 2021. The document includes the event description.

2. Event Description

2.1. Description and aim of the activity

The Germany Local Event was scheduled by KIT in the dependences of Beo Network for professional Orientation in Karlsruhe City Youth Committee. It involves several people related to education and interested in the topics of the project. However, due to hard COVID-19 [9-21] restrictions in Germany during March of 2021, the event has a low number of assistants.

2.2. Agenda of the activity

Multiplier event Beo network for vocational orientation, 30 January 2021,
8.00 a.m.-5 p.m

Agenda

Dr. Daniela Reimann, Markus Müller, KIT

8.00-13:00

- Introduction to the Robosteam project results and challenge-based learning
- Smart textile /Arduino LilyPad Technology didactic approach
- Exploration of examples of interactive objects: What happens?
- If-then –relations, laying paper blocks, term of algorithm

Coffee break is flexible

- Identification of electronic components, sensors, actors, connectors,

- Wiring circuits
- Identification of software
- Programming with blocks

lunch break

13.30-16.30

- Hands on!
- Project work

Learning materials

Powerpoint, Handout, Tutorial



16:30 Closing

17:00 End of session

2.3. Tools used during the activity

As commented in the agenda the materials employed were a power point, handout kit and a tutorial.

3. Signatures

1   Co-funded by the Erasmus+ Programme of the European Union



Evento multiplicador
March 2021

Beo network for vocational orientation of the city youth committee (Stadtjugendausschuss Karlsruhe),

Participant list, 30 march 2021, 8:00-17:00

	Name and Surname	Institution	Country	Email (optional)	Signature
1	Gabi Matusik	Beo network for vocational orientation	Germany	g.matusik@stja.de	<i>G. Matusik</i>
2	Friederike Renz Araújo da Silva	Beo network for vocational orientation	Germany	f.renz@stja.de	<i>Friederike Renz Araújo da Silva</i>
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5	Natalie Plekert	Beo network for vocational orientation	Germany	n.plekert@stja.de	<i>Natalie Plekert</i>

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2   Co-funded by the Erasmus+ Programme of the European Union

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5	Denise Gegenwarth	ERS	Germany		
6	Maria Elena Geßner Morant	ERS	Germany		
7	Juliana Kunz	ERS	Germany		
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2018-1-ES01-KA201-050939

	Name and Surname	Institution	Country	Email (optional)	Signature
16					
17					
18					
19					
20					
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22	Markus Müller, B.A.	Institute for Vocational and General Education IBAP	Germany	uecq@student.kit.edu	
23					
24					

2018-1-ES01-KA201-050939

4. Documentation

4.1. Leaflet

Partnership

UNIVERSITY OF SALAMANCA

UNIVERSITY OF LEÓN

POLYTECHNIC INSTITUTE OF BRAGANCA

UNIVERSITY OF EASTERN FINLAND

COLÉGIO INTERNATO DOS CARVALHOS

IES ERAS DE RENUEVA

Karlsruher Institut für Technologie

AGRUPAMENTO DE ESCOLAS EMIRO GARCIA

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<https://www.facebook.com/groups/ROBOSTEAMPPOINT>

<http://robosteampoint.eu>

PROJECT

TARGET GROUPS

- Teachers and school staff concerned with actions for integrating STEAM through challenges where PD&R is used.
- Staff of the partners institution Students (secondary school level).
- Physical Devices and Robotics (PD&R) developers.

ACTIVITIES

- Project Management.
- Quality Assurance.
- Pilot Phase 1.
- Pilot Phase 2.
- Dissemination and Mainstreaming.

CONTEXT

The present project aims to experiment with STEAM integration projects that help learners to develop computational thinking by using/programming physical devices and robotics (PD&R) in pre-university education environments. To this end, the present project proposes the exchange in the European context of experiences related to this topic. This would allow training of in-service and future teachers in such a way that they can apply this knowledge in class. This project will define a set of challenges and tools to address them. Two pilot cycles will be carried out exchanging these challenges and tools between institutions so it is possible to analyze the impact of the context where they are used. From the results achieved and the instruments used, good-practice guides will be defined about the development of computational thinking from STEAM integration.

OBJECTIVES

- Definition of a knowledge base to facilitate integrating STEAM and computational thinking by using robots.
- Analyse the different existing activities that deal with STEAM integration.
- Define some challenges and instruments to facilitate STEAM integration and computational thinking development.
- Define metrics to evaluate both the integration and the competence development.
- Establish guides for the definition of integration STEAM challenges by using PD&R.
- Define educational resources for in-service teachers and future teachers.
- Establish ways of collaboration between robotic companies and educational institutions.
- Publish the obtained results in order to involve other educational institutions of the same and different contexts.

OUTCOMES

- Analysis of current STEAM integration background in European schools.
- Set of methodological and diagnose tools that facilitate integrating STEAM through PD&R.
- Bank of instruments to assess STEAM related competences acquisition.
- Analysis of the application of PD&R in educational contexts and sample PD&R toolkits for integrating STEAM.
- Design and implementation of training actions.
- Guides for defining integrating STEAM challenges that use PD&R in different contexts.
- ICT tools (questionnaires, rubrics, learning analytics tools) to track how STEAM integrating is carried out and gather evidences.
- Contact networks among the companies that develop PD&R for educational contexts.

GRUPO DE ROBOTICA

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