



Mateusz Kubat, MSc

E D U C A T O R , R E S E A R C H E R

HEART Project

(Help educators to teach through robotic tools)
no. 2021-1-PL01-KA220-ADU-000035164
Database and Guide on Educational Robotics

WWW.HEARTROBOTICSPROJECT.EU

- **Please, introduce yourself**

I am a PhD candidate at the Lodz University of Technology, and I am working in the project CMI (<https://cmi.edu.pl/>) aiming to increase the competences of the teaching staff, i.e., people conducting extracurricular activities developing IT interests, as well as activating IT-talented youth, stimulating creativity and promoting team cooperation within IT clubs. The project is directed to teachers of primary and secondary schools and to other adults who show talents and skills to work with talented young people (with general and technical profiles) and to branch schools of the 1st and 2nd cycles.

- **What type of educational robot does your organization have?**

Within the CMI project we are using programmable mobile robots, Kit-based mBOT

- **How many times did you use the robot?**

Frequently during the first year of the project in order to learn its capabilities and prepare myself for the lessons (approx once a week when lessons were approx once a fortnight). After that only while teaching and occasionally to remind some of the more advanced or rarely used options.

- **How and in what contexts your robot be used?**

Education of teachers who work with highly skilled high school students.

- **Which job/ skill/ activity is supported by the robot?**

Mainly STEM job activities: Electrical engineering, programming, robotics.

- **If not confidential, who provided your organization with this robot?**

<https://robotyedukacyjne.pl>

- **How long did the development of the education scenario take?**

Development of the core scenario took 1 year but it is still being improved.



Co-funded by the
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- **Is there any ready to use content that you can share with us?**

Samples created by robot supplier are available

<https://robotyedukacyjne.pl/scenariusze-lekcji>.

- **Have you experienced any problem(s) with the robot?**

Uncertain behavior when batteries insufficiently charged - uncertain enough to initially suspect that this is a programming error.

- **How was the problem resolved?**

Checklist - change batteries or run the program known to be correct to see if the problem persists.

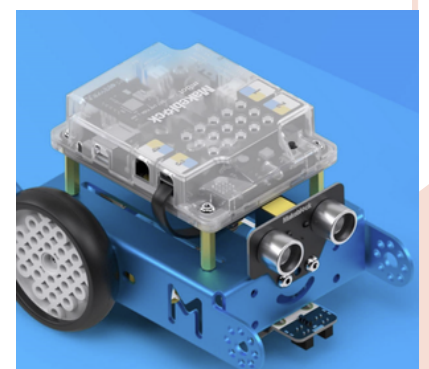
- **What consequences did this have on your day-to-day operations?**

Minor inconvenience - resolving took around 5-10 minutes but due to the remote learning I cannot tell how long could a participant need has it happened to him or her at home.

- **Is there anything else you would like to share with us?**

It is important to not only have educational scenarios but own solutions as well. It leaves more time for teaching/talking with participants. It is also helpful to have own versions of some of the scenarios - preferably more advanced. Scenarios as given by the distributor tend to be narrow in nature, which is good for basic learning, but it can hide the broader scope of the "true" engineering solutions. It is also important to let the participants know that there is more than one correct solution to a given problem. This is especially important when participants themselves are teachers in elementary/high school.

This project has been funded with support from the European Commission. This publication [communication] reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein



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