

1st LTA – Minute

Lubin, Poland

12th - 16th, July, 2021



Educational Robotic and Programming and Learning Scenarios
2020-1-PT01-KA201-078670

1st LTA – MINUTE

The first Learning and teaching activities meeting was held in Lubin between 12nd and 16th July 2021, with the purpose of learning and teaching activities with workshops were taking place, to apply in its schools or other partners institutions.

The first meeting in Lubin, was the first face-to-face meeting for which everyone expected for long time.

The activities were started with the intervention of coordinator Manuel Russo and the guidance of Mr Grzegorz Stozek. On the first day of the meeting, the partners did their presentations, to all the members present, to better know each other and developed activities.

This activity lasted all morning and enabled a great exchange of ideas and potential between the partner institutions represented here.

The representative of the Polish school welcomed us and wished us the best successes for the activities would be developed during the week.

we visited the facilities of the Polish school which in lubin is just one of more than 40 centers spread throughout the country.

During the afternoon, the activities already carried out were taken, and the next LTA and TPM were scheduled to be held in Erzin, Turkey, in Bitonto, Italy, and the following to be carried out in Portugal, according to a gantt chart attached.

On the second day, the presentation was made by Mr. Michael Tozek, representing the Polish company of mining industry, where it was explained its activity in poland and in the world. It has also been explained, all the support provides to the society in which it is part. In the form of foundation helps polish schools, especially schools linked to the mining industry, essential activity of the lower silesia, especially the city of Lubin.

After discussion on the company, its role in Polish society and its innovative technologies, began the 3D presentation.

Mr Grzegorz Stozek, did his workshop on 3D technology. We could see the various phases, from the modeling to the production phase of the components drawn in 3D.

The autodesk inventor software was used, and showed the ease of 3D modeling.

In the printing of the models, pruser printers were used, from which evidence was removed for the project.

On these printers were printed several components of the robot, which will be assembled in the next session by all participants.

The models of the robot components were made available to all participants, so that they can also disseminate the project in their institutions.

During the afternoon, the workshop on the robot assembly process was held, responsibility of Mr Luis Dourado, in collaboration with Ms Fernanda Ledesma.

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With a previously distributed script, participants were able to quickly after presentation, assemble the robot components, motors, cables, wires, arduino board, engine controller board and shield.

On the third day, we continued the assembly workshop with teacher Luis Dourado, and proceeded to the installation of software and robot calibration (after installation of the Arduino IDE and presentation of ardublockly software). This set of software allows you to quickly program the robot.

Ultrasonic sensors were also added, for this, the respective "library" was installed, and the code of the desktop pc was transferred to the Arduino.

The bluetooth module was tested, which after transferring the library, and its code, we were able to test with the mobile app, its operation after pairing the devices.

The session was very productive, with all participants managed to carry out the proposed tasks, being now able to disseminate them in their institutions.

On the fourth day, Mr Grzegorz Stozek held a workshop, about the mining industry, and connected activities, ranging from industrial production of pieces for machines, produced in a traditional and computerized way in 3d, welding, equipment and safety techniques in the mines.

the workshop was good to make the participants aware that being a miner is a highly specialized activity, which involves a lot of technical knowledge and training, in several areas, and which are extremely important to ensure safety.

In this workshop was shown to the participants, the production of a piece 3d, from the image of g.code programming, developed in Autodesk Inventor.

it was shown, the form of calibration in the different axes in relation to the material used, through a system of knives, with several functions.

production of 3d pieces involves several precautions consisting of informing the machine, as far as it can erode the workpiece without damaging the workpiece or the machine.

From this entire workshop, we took evidence, which allows us to better understand how 3d printing works, in a more industrial aspect, and to make a connection to our part printing, at pruser.