

INTRODUCTION

“We build empathy by coding” is an educational and prosocial robotics game developed within the “Robotics versus Bullying” project, co-financed by the Erasmus + Program of the European Commission, Sub-program “Support for Policy Re-form”, Action “Forward-looking cooperation projects “(612872-EPP-1-2019-1-IT-EPPKA3-PI-FORWARD). The partnership of the RoBy project is made up of 11 organizations from 9 European countries: public organizations, associations, research centers, universities, industries.

The Robotics versus Bullying (RoBy) Project promotes a holistic approach to learning through the use of robots, and peer cooperation as a tool to prevent bullying and promote social inclusion. This goal is achieved using robotics and digital tools. In addition, thanks to non-formal teaching and game-based activities, students aged 6 to 12 will improve their digital skills and modify their approaches to STEAM.

The educational robotics activities proposed by the RoBy project focus on the prevention of the bullying phenomenon. The robot is suggested as a tool to be used in groups, in order to improve social and communication skills in a creative, engaging, and non-judgmental environment. Working together, in a peer-collaboration, favors the development of a social environment in which bullying actions hardly find space, since the entire group of peers learn an attitude of care and protection towards all its members. The use of simple educational robots also proved useful in facilitating the inclusion of children with cognitive or behavioral difficulties and special educational needs in general.

For more information on the project and on the socio-psycho-pedagogical references on which RoBy’s educational model is based, you can visit the website www.roboticsvsbullying.net

THE GAME - psycho-pedagogical references

Identify the main objectives of the game in terms of what the children can learn individually and in relationship with each other. What attitudes they can develop. Describe the role of the teacher, from a pedagogical point of view, during the game.

The purpose of this activity is to correlate different teaching subjects and learn the coding process on the one hand, and on the other hand, students will be able to develop their communication skills, cooperate, help each other, develop their own creativity by finding specific collective and Individual solutions to problems, to calm down, to develop empathy, which is a significant step towards achieving fair play and respect for others.

By applying the Robot RoBy (MIND) teachers create a positive emotional climate, and empathy is essential to build awareness of this, to make it positive and enjoyable.

GAME DESCRIPTION

Introduce the game with a general description: age of the players, general aim of the game, etc.)

The game is designed for students in the second year, 7 years old, and is based on a platform that the teacher can adapt to the content. Depending on the age of the students and their experience in the game, it is possible to define tasks of different complexity.

The general goal of this game is to build (develop) communication, collaborative skills and pro-social values. Through the game, students have the opportunity to start a conversation on a given topic (says what he thinks and/or asks a question); To use the appropriate pitch of the speaking tone, depending on the communication situation and the interlocutor; to follow and give directions for position, direction and movement using an arrow as a symbol; state which qualities are important for cooperation with classmates.

Description of the robot

Describe the robot that can be used for this game.

The game has been designed for the educational Mind Designer Robot. Robot Mind Designer is the new intelligent robot that introduces the child to coding and drawing, accompanying it in the discovery of arithmetic and geometry. With the integration of voice recognition, this unique robot will recognize and follow the commands given by the child, giving you the possibility to learn about drawing, arithmetic and geometry in an intense and fun way! The choice of this tool is due to the fact that this product does not have a gender characterization and is well received both by males and females, especially for the +7 age but also for older children at their first experiences with educational robotics. The Mind robot develops logical thinking, learning of mathematics and geometry, design and arithmetic skills. The friendly voice involve children and keep their attention focused on the activity. The Mind robot is programmable with the arrows on his back in a simple way. Also, this robot is very useful in facilitating the inclusion of pupils with special educational needs.

List all the parts required for the game

- Poster board
- Iambic cube
- Cards in four colors (red, yellow, green, blue with given tasks and directions)
- Empathy patches (stickers)
- 5 sticks in different colors
- Envelope with positive thoughts/cards
- Bono's Hats Self-Assessment/Reflection Card
- Instructions for playing the game
- Mind robot

Description of the board

Describe the game board and the different boxes.

The table consists of 24 fields in four colors (red, yellow, green and white). Each square is 15 cm by 15 cm. On the board there are directions for movement and programming, that is, the moves that the robot can make according to the number that will fall during the roll of the cube. The colour of the boxes shows the task to be completed. The blue box represents the starting point for the game.

Description of a game session

PREPARATION

Describe how the class is prepared for the game. How to define the division into groups, tips to allow the game to run smoothly from the start. How to prepare the platform material.

In the Intro activity, students are encouraged to discuss the first day of school:

- How did you feel about your first day of class?
- Were there any new friends in the classroom?
- Do you know any friends who use wheelchairs?

Students then follow the digital audio image book "Hana in a wheelchair" (International Step By Step Association)

Followed by discussion on targeted issues:

- What was the main character we came across in the story?
- Where does the event take place in the story?

- Why was Jana afraid on her first day at school?

"What did Jana do to cheer herself up?"

In the main part the game is played. Students are divided into groups of 5 and play the game "Develop Empathy with Coding" using the Mind robot and the game rules indicated. Groups can be formed freely, by the children themselves; to be created by the teacher at random or according to criteria which the teacher considers most appropriate.

START

Describe how the game starts, what is distributed at the beginning of the game. How the exchange sequence takes place in cases where there is more than one player ...

The game is played by 5 students for approximately 20 minutes. In front of them is a pole with 24 boxes in four colors with directions, the mind robot located in the box of departure, a cube and cards with directions. The order of players is chosen with a count.

The Core of the Game

Describe the process and objective of the game.

Define any challenges and/or advantages that can be received by playing the game.

1. Each student gets a stick of a certain color, on which they have to stick Empathy patches (stickers) during the game.
2. The order of the players in the game is determined by a number.
3. The first player throws the dice and according to the number received and the instructions in the poster, program the robot.
4. After the robot reaches a certain field, the student draws a card of the same color as the field. He acts according to the directions on the card. The teacher or student mentor reads the task or direction given on the card
 - Red Card - To say or write a sentence in which he will apply the word from the card (respect, honesty, kindness, cooperation, care...). If the student can write, he or she can write the sentence on the blue card;
 - Yellow card – To act according to the direction (Say a nice word to the friend next to you; Hug the friend across from you, Ask the friend to the left of you how he feels today, Send a smile to the friends around you...) a short discussion.
 - Green card – To describe the picture, and then a short conversation is held in the group about the situation shown.
 - ✓ If the player successfully completes the task, he gets a patch which he sticks on the stick.
1. The second player continues from the place where the robot stopped, in the same way.
 - If the player stands on an empty square, his turn passes, he loses the chance to patch and the next player continues.
 - If, according to the directions, he cannot move the robot on the poster and leaves the frame, then the robot stays on the same square, the player loses the chance to patch, and the game continues with the next player.
 - If the robot is not possible to move with any option of the numbers from 1 to 6, then the robot returns to the START position.
6. The winner is the player who manages to stick the most stickers.

CONCLUSION

What happens at the end of the game session?

The winner of the game gives the rest of the players a card with an empathic message in an envelope. This keeps them from feeling defeated in the game. Followed by reflection, self-assessment with the technique "Bono's Hats" (Red Hat: How did you feel today?; Yellow Hat: What did you like?; Black Hat: What did you not like?)

Variants

Once the game has been described in detail, it is possible to offer variations on the main version or simplifications to make the game more accessible to younger children or those with difficulties.

The tasks of the game are adjusted and adapted according to the age of the students. For the younger students, the teacher is the one who directs, helps and encourages or mentors the older students from the higher grades.

Keywords of this didactic proposal:

STORYTELLING, FAIR PLAY, EMPATHY, COLLABORATION, CREATIVE PROBLEM SOLVING, PROSOCIAL VALUES, RoBy