



prof. Liliya Terzieva

E D U C A T O R

HEART Project

(Help educators to teach through robotic tools)

no. 2021-1-PL01-KA220-ADU-000035164

Database and Guide on Educational Robotics

WEBSITE:

- [Please, introduce yourself](#)

I am a professor of applied sciences with over 18 years of experience in the field of teaching and working with adult learners. In my practice I meet mostly students. I also work with adult learners in various training centers, lead a number of lecture courses and have extensive experience with bachelors, masters, doctoral students and independent learners attending courses in the training centers with which I work.

- [Have you ever worked with robots during your work with adult learners?](#)

I am very happy to share with you the results of the fruitful work I do with the help of robots in learning. For me this is not new, but already a practice and I accept it as an important part of innovative adult learning.

- [Can you tell us more about the type of robot you worked with?](#)

I can say that one of the robots I work with is called Pepper and he is an integral part of my job. The other is more of a variety, it's called Lego Mind Storm. I also use it, but for different purposes.

- [How many times did you use the robot?](#)

In one of the universities where I teach we have a specialized laboratory, where we often use the robot – Pepper to conduct various research, but for larger applications I have used it more than 5 times and much more for easier teaching tasks.

- [How and in what contexts your robot be used?](#)

Here I will distinguish the two robots, because they are used for different things. As for Pepper, he's really amazing. It can be used for many activities, but is especially useful in teaching students and adults and in conducting research. From my practice with it, I can share what I use it most often.

Pepper has sensors to read different experiences and how they affect the human body, because it measures blood pressure, blood circulation, sweating levels, heart rate and many other indicators that assess the impact of one or another factor on individual experience. and the human body.



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To understand me better, I will give you a specific example - if you want to put into operation a new attraction in an amusement park for children and adults, where the attractions are designed for people between 1 and 100 years, you will want to know in advance how certain attraction would be perceived by your audience. For this purpose, we can use Pepper, who based on the data we have provided him with his sensory diagnostics can determine the level of impact of this attraction on consumers.

We can use the same sensors to determine the impact of lecture material on students, to determine the degree of engagement in the classroom, to see what provokes interest in the audience and what makes it difficult. Based on this research, the teachers then complete the lecture material in accordance with Pepper's semi-black results and upgrade their work materials.

His other application is combined training with a teacher and Pepper. This is a blended learning, for which we have previously given Pepper a sufficient database on the specific topic, so that he gets involved with the teacher and gives explanations, examples, supports the teacher with comments, illustrates models etc.. Here we have a real interaction with students. In this way, students more easily perceive the material, everything is more entertaining and interactive, provokes creativity and definitely leads to increased interest.

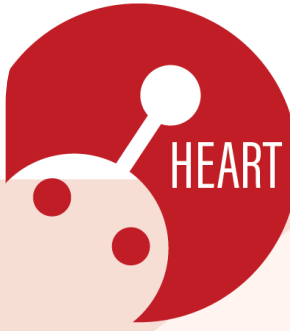
I would also like to share the benefits of Lego Mind Storm, which is also used to work with students and adult learners. Although it is very different from Pepper, it is suitable for training in time management, decision management, teamwork and many other important good practices for students. I have colleagues, teachers who are already certified for LEGO® Serious Play® method.

We found that when learners have trouble sharing information about themselves, for example, to the question determine what are your strengths ?, we can find the answer through Lego models.

As they arrange their Lego model, they build it intuitively, without thinking about what and why they construct. When they are not under pressure to answer a specific, personal question, they automatically start thinking with the left side of their brain. Thus, telling how they built their model, they do not talk about themselves, personally, but about their model, and thus we get information about them through their model.



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- If not confidential, what was the costs for implementation

I do not know what is the price for the implementation of Pepper, as far as I know, such a robot can cost between 1,600 and 30,000 euros, depending on the purpose for which we will use it.

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

I have never had any problems with Pepper, he was created so easily that intuitively anyone could easily start working with it.

- From your point of view, is this robot suitable for teaching children?

From what I see in my work with adults, I am convinced that Pepper would be extremely useful for working with children over 10 years.

- From your point of view, is this robot suitable for teaching adult learners with disabilities too?

This type of robot can be widely used because their database and can be upgraded depending on the main purpose of the teacher. The robot receives information, data and "knowledge" from the trainer who will use it. It would help people with disabilities to hold their attention longer, to help them memorize information in the form of games, to provoke them to repeat with him and much more. It would be widely used in working with people with disabilities

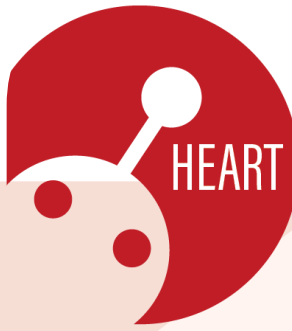
10. Do you personally train other teachers to work with Pepper?

I would not say that colleagues have a special need for training, I perceive myself as a person who gives basic guidelines for operation with Pepper. Anyone who has contact with this type of robot starts timidly, but quickly relaxes and sees how easy it really is. But in brief, yes, I train other teachers to work with Pepper.

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