

HEART Project

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

• Please, introduce yourself

Renato Grimaldi is full professor in discipline for scientific sector (Sociology) at the Department of Philosophy and Educational Sciences of University of Turin where he teaches research techniques, simulation and educational robotics for the three-year degree in Educational Sciences and Advanced Methods of Social Research for the Master Degree in Pedagogical Sciences. He is responsible and contact person for the basic courses in Computer Science of all the Departments that report to the School of Humanities of the University of Turin. He is part of the scientific committee for some university masters where he is also a teacher. He taught in the School of Higher Studies of the Turin University. Since 2019 he has been Scientific Coordinator of the Behavior simulation and educational robotics Workshop, "Luciano Gallino", established as part of the Excellence Project won in 2018 by the Department of Philosophy and Educational Sciences.

Silvia Palmieri is a Ph.D. candidate in the Department of Philosophy and Educational Sciences and collaborates on the "Luciano Gallino" Workshop. More information can be found here:

https://www.dfe-eccellenza.unito.it/infrastrutture/laboratorio-luciano-gallino

https://www.facebook.com/labgallino

https://educazione.campusnet.unito.it/do/corsi.pl/Show?\_id=x5ib

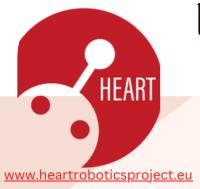
What type of educational robot does your organization have?

We have all kinds of robots. We choose the type of robot according to the context in which they are to be used.

How many times did you use the robot?

Every day during university workshops or through the 'Luciano Gallino' Laboratorio.





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How and in what contexts your robot be used?

They can be used for educational projects for people with disabilities, in rehabilitation or hospital settings and also in a teaching context.

An experimental degree thesis, for example, dealt with educational and empowerment aspects with ASD children. (If we are interested, they can provide us with various theses on the subject).

• If not confidential, who provided your organization with this robot? What was the costs for implementation?

The funding provided by CampuStore can be won through a number of tenders. In the 2018 we won the Project of Excellence for the Department of Philosophy and Educational Sciences at the University of Turin: we received €30,000. With this budget we were able to purchase the 'Pepper and Nao' robots (10.000€) and the 'Pepper robotic arm' (20.000€). If you want more information, you can find it here:

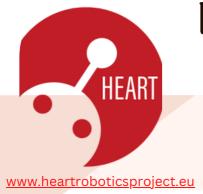
http://www.comune.torino.it/cittagora/altre-notizie/robot-al-servizio-dellapprendimento.html

https://www.aldebaran.com/en/pepper-and-nao-robots-education https://iris.unito.it/retrieve/handle/2318/1765656/689880/2020\_12\_31\_I%20social% 20robot\_pubblicato.pdf

• How long did the development of the education scenario take?

We have been doing this for years, but you always have to keep in mind that in order to design together you have to be able to adapt. This means that you always have to adapt the robot to the context. The concept of 'personalisation of learning' is also central to the field of educational robotics, because the robot must always play a supporting role during an educational/rehabilitation activity. It must never replace the operator or the student.





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• Have you experienced any problem(s) with the robot? How was the problem resolved? What consequences did this have on your daily operations?

It can happen often and one has to arm oneself with patience. Robots can also get sick, catch viruses or wear out. One must always have an elastic and flexible approach when using robots, because they are not totally reliable tools.

• Is there any ready to use content that you can share with us? Are there tutorials for the use of the robot?

Here you can find "Luciano Gallino" Laboratorio's youtube channel: https://www.youtube.com/channel/UCVFvQ7uiYmk8FLA5yaKgBXAhttps://www.youtube.com/watch?v=np16roO\_IWYhttps://www.youtube.com/watch?v=UWIJiloQ78o

• Are the materials for a non-expert audience? Does the robot need additional kit of components to be fully working in the sphere chosen?

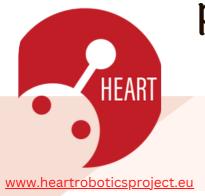
It always depends on the use and context. If it is an educational use, the approach may be simpler and the robot to be used is also less complex than in the medical and rehabilitation sector.

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

Another interesting robot is the 'Timia', whose manufacturer is located in Switzerland:

https://www.tvsvizzera.it/tvs/intelligenza-artificiale\_la-rivoluzione-della-robotica-passa-dal-ticino/44671386





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