

An aerial, grayscale photograph of a city with numerous skyscrapers and buildings. Overlaid on the image is a graphic consisting of a solid green rectangle on the left, a white rectangle in the center, and a dark blue L-shaped border framing the white rectangle.

ROBOTICS:

A THERAPEUTIC

APPROACH

ICT

- **Guidance:** The companion manages group dynamics and motivates, creates a climate of trust, dialogue and interaction.
- **Individualization:** following constructivist approaches and significant learning, we can take as a starting point the interests and the level in which each individual is.
- **Monitoring and evaluation:** Getting them to select the information to integrate it into their daily lives.
- **Capacity for interaction and autonomy:** They can decide the sequence of the information and establish their own rhythm.

• New tools in the center:
Pictograms Room, harmony,
social robotics. Research with TEA.



COGNITIVE AND SOCIAL STIMULATION

ARMONI

Cognitive stimulation table.
With personalized activities
based on a first evaluation of
the cognitive functions to be
addressed.



PICTOGRAMS ROOM

Difficulties in understanding body
language, self-recognition,
imitation or joint attention ... are
critical developmental skills for the
child with ASD that can be
addressed in a playful way within
the pictogram room.



WHAT IS A ROBOT?

- **A robot:** is a programmable machine that can manipulate objects to perform operations that could only be performed by human beings.
- **Social robotics:** interact with humans in a totally natural or intuitive way as if it were just another living being. They have to be autonomous and have a pleasant appearance, and their main objective is integration with people. It has to be easy to program for inexperienced people. They have to be endowed with a great capacity for learning and adaptability to non-pre-defined and dynamic environments.
- It provides technological and human solutions and benefits, as well as providing care and treatment to patients.



NEW INVESTIGATION PROJECT IN VILLABLANCA, ROBOTEA



ROBOTEVA VILLABLANCA

- Recent research has supported the use of social robots as a tool in the interventions of children with ASD.

Objective:

- Explore the applicability and usefulness of using the social robot as a tool for parents/guardians of children with ASD.
- Pilot research with the robot Cozmo with a population of children from Reus between 6 and 12 years old.
- 12 sessions with pictograms to evaluate functional communication with the help of the new robot.

Approach

- The system begins by teaching the child to deliver a pictogram to a communicative receiver, then teaches to differentiate pictograms and put them together in a sentence, finally, in the more advanced phases, the child learns to answer questions and make comments.



ROBOTICS AND SOCIAL

SOCIAL:

- To make robots have, in addition to artificial intelligence, **empathic** components towards humans. Giving them zoomorphic shapes will make them closer and more accepted.
- Link: [cofianza](#)



ROBOTICS AND THERAPEUTICS

THERAPEUTICS:

- The capabilities used in hospital management have many potential benefits and pose a use increasingly accepted by health professionals: the use of pets.
- Improvement of the patient's state of mind.
- Decrease in the level of anxiety.



ROBOTIC TOYS. HHSS, LEARNING AND STIMULATION

BEE-ROBOTS



It boosts logic
It teaches how to program
It enhances cognitive abilities
Social skills, waiting times

OZROBOT



Maintenance of global attention
Learning colors and graphics
It boosts logic, learning codes
Memory and anticipation



THANK YOU FOR YOUR ATTENTION!

