Issue 2, 2020 March

PEARL
Emotional Empathic Proximal Learning Educational Environment
2018-1-IT02-KA201-048515

www.pearl-project.org

Co-funded by the Erasmus+ Programme of the European Union

Emotional Empathic Proximal Learning Educational Environment – PEARL

"PEARL" EXPERIMENTAL DESIGN AND ACTIVITIES

The PEARL project aims to develop, test and validate an innovative and high quality educational model for the development of an educational environment of emotional and empathetic proximal learning in the age range from 0 to 6 years that can be replicated at European level. The model to be developed will lay solid scientific and theoretical foundations in the neurological development of the child and in pedagogy through educational strategies for the development of prosocial skills with the use of robotics and new technologies. The model places the group, peer relations and the development of empathetic emotions at the center of its action for the creation of a proximal learning space that favors a correct approach to robotics technologies as educational and learning tools. In the relationship with peers, the child can take on different roles and is called to cooperate in the small group and to agree by learning to take the other's point of view, developing cooperation and sharing skills. The main focus of the educational model will be on the positive emotional impact on the learning and education processes, through the use of robotics for prosocial values (cooperation, empathy, mutual help, etc.). Robots can help develop computational thinking, also, according to the PEARL model, their use in group sharing, relational and communication skills, empathy, creativity, personal expression, etc. Robots will be used to promote prosocial skills and values.

GENERAL EXPERIMENTAL DESIGN

The age range considered by the project covers very different levels of development, therefore there have been identified 3 main experimental groups according to the age of the children:

- from 0 to 2 years: prosocial and empathic learning in nature
- from 3 to 4 years: prosociality and emotions through the first coding principles
- from 5 to 6 years: prosociality and emotions through coding and robot

PEARL approach to these age groups is focused on the need to develop the children's capacity to significantly connect to each other. The way proposed is through the imitation of a group of teachers and fostering of educational emotions in the group activities. With the children aged 3 to 4 years and 5 to 6 years, the aim of the experimental phase is to observe the development of educational emotions and empathetic proximal learning environment supported by the use of a robot as an engaging tool that accelerates the educational processes and influences communication and inclusion. The experimental activity is challenging for the pupil so it will be possible to observe the reactions (positive and negative) to frustration, the rise of educational emotions and how they influence communication and inclusion.

The experimentation will be divided in 2 main phases:

A) Mid November 2020 - End of January 2021: deep analysis of the impact of facilitator elements (nature and robots) in the development of an inclusive and empathic proximal learning environment. Practitioners in psycho-pedagogy will analyze the videorecordings of the experimental sessions, identifying the relational and communicational patterns, the natural behaviour of the children toward their classmates and the dynamic of inclusion and exclusion. The experts will give a professional, careful and precise analysis of the developmental, emotional, communicational and relational aspects of the experimental activities. They will also develop a graphic representation of the communicational and inclusion dynamics

B) Mid March 2021 – End of May 2021: wider experimentation of the PEARL model. After the training the teachers will implement experimental activities collecting data through observation sheets. This phase will involve a bigger number of children implementing different activities inspired by the PEARL approach.

SECOND OBSERVATION PHASE

In the second observation phase the trained teachers will be involved in a wider experimentation. This phase will collect more data, being open to larger target groups: classes with no disabled children, pupils that have already experienced the use of the robot, etc.

ONLINE TRAINING COURSES: https://pearl-project.org/it/pearl-training-course/

After the experimental phases it will be implemented a training phase (March) in which about 150 teachers will receive training on the reviewed PEARL model and observation tools. The main contents of the training is:

- Environment of proximal development and educational emotions. How the group and the relational environment influenc emotional and cognitive development. The importance of creating an empathic emotional learning environment.

- Robots in early education. The potential of the educational robotics with children: cognitive and relational aspects.

- Observation of the group dynamics, Verbal and non verbal communication, relational dynamics, hidden conflicts and inclusion / exclusion behaviours.

- Assigning roles. The meaning of a role in the relational dynamics, how to assign roles.

- The influence of teacher's expectations on activities' results / the importance of allowing children to make mistakes.The importance of children's “trial and error” phase in the enhancement of divergent thought, problem-solving abilities, group communication, inclusion and expression of personal potential.

- Inclusion of the disability. How to promote inclusion since the very early age through and emotional proximal learning environment.

- Assessment and methodology. Piloting strategies, and assessment of scientific methodology.

FOLLOW UP & LOCAL TRAINING COURSES

With the experience gained during the first experimental phase it will be developed an observation tool of the educational – pedagogical processes to be used by the teachers.
During the training course a bigger number of teachers using robots, applying the experimental activities and using the observation tool will be trained.

MULTIPLIER EVENTS

The first multiplier event hosted by Gazi University will be held at the beginning of June 2021.

May 2021 Verona (Italy). The event will present the results of the validation of the PEARL educational model at the end of almost two years of experimentation and the intellectual output produced. An important space will also be dedicated to the presentation of the white paper on innovative educational approaches.