

Recent history of coding in Italy

It was January 2016 when Prof. Alessandro Bogliolo (University of Urbino) launched the first video lesson of the MOOC: *Coding in your classroom, now!* Hundreds of teachers followed him, interested in introducing coding and computational thinking in their classrooms. Since then, that learning Community has grown exponentially.

Cody Roby was introduced two years earlier, in 2014, by Prof. Bogliolo, encouraging people to participate in the European Robotics Week by organizing simple activities with an unplugged coding method.

CodyRoby is a game and, being a programming language, it can be used to build and develop other games. It's a very flexible tool to be used by all teachers of various levels and disciplines. The evolution has been fast: from the downloadable kit from the internet, we now have a big carpet and giant cards.

Prof. Bogliolo started to bring coding not only into schools, but also to cinemas, theatres, universities, and squares, during live events, involving teachers and students. Many other MOOCs (Massive Online Open Courses) have followed approaching the importance of daily life algorithms, the human part of digital and programming, bringing coding beyond the classroom to open spaces and spread coding out in specific Communities.

Coding is for everybody, not only for programmers. This concept has been the leitmotif of many literacy Campaigns that, in recent years, have involved Italian Schools massively.

During 7 editions of the Italian Coding Summer Schools, set in Urbino, attended by teachers from all parts of Italy, many games and activities have been conceived.

In 2016 the game paradigm of Cody Roby became an expedient to create a Coding Treasure Hunt, led by a BOT Telegram, that was the main activity of Cody Trip, an educational trip to visit amazing italian cities and live an immersive coding experience.

In 2017 CodyMaze was invented. It's a game played on a virtual checkerboard with 25 QR codes. Scanning them with a smartphone, you become a robot and receive instructions from a BOT Telegram, which generates a path through the invisible labyrinth. By following the instructions of increasing difficulty, you can find your exit way and get your certificate.

The so-called *Coding in the Square* let adults and kids play in many italian squares and amusement Parks. In 2021 a new version called "astrophysical CodyMaze" was launched in collaboration with the Astrophysical Italian National Institute. Here questions about astronomy and many aspects concerning the universe, are linked to computational thinking training.

In 2018 two important variants of CodyRoby were tested: CodyFeet, suitable for kindergarten children and *CodyColor*, from which also an online version was born.

The battle of CodyColor was played by teachers from various Countries during the European Coding Summer School, held in Brussels in July 2019, and by students from schools of all Europe, even among eTwinning projects.

During pandemic time, a collection of short videos, do-it-yourself materials, puzzles, games and coding challenges for everyday use were created by Prof. Bogliolo and shared in the EU CodeWeek official website, as free resource. *Coding@Home* helped many teachers and students to feel stronger and busy during the learning distance period. No need previous knowledge or electronic devices, the activities, still available online, stimulate computational thinking of pupils, parents and teachers at home and in school.

In the latest years of coding (re)discovery great energy has been given by code.org which offers free lessons and activities on the online platform, including reflections also related to a sustainable future. The Italian Ministry has also done its part by investing in coding and making it mandatory in kindergarten and primary schools by 2022. The European Commission also recognizes and rewards the participation of schools involved in the EU CodeWeek with a Certificate of excellence in Coding Literacy. The Ministries of the European Countries have employed many resources to support teachers and their professional training, through coding development and its integration in school subjects.

Next november CodyRoby will be eight years old. Eight years with great growth and development of new approaches that encourage interactivity, cooperative learning, critical thinking, and creativity. The success obtained so far, show that apparently difficult concepts can be transmitted through practical examples that make learning more stimulating and involving. These are important skills to face the challenges of a complex society and to build future active and aware citizens.

The European Campaign started as a grass-roots initiative 9 years ago with the support of the European Commission. CodeWeek is turning 10 years old next October. Special events and activities will be organised, starting by baking a birthday cake. Ready to code?

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