

## Pinocchio 2.0, robot and other stories

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*"Once upon a time ... - A king! - My little readers will say immediately. No, guys, you are wrong. There was once a piece of wood" ...*

and ... that piece of wood in our project Pinocchio 2.0, represents the realization of ideas, dreams, aspirations, desires of children and adults; becomes, therefore, any "object" or "subject" constructed and / or shared -in presence or through the network- by several traveling companions, who take the role of "Geppetto", because they "make" concrete, alone and / or in a collaborative way, an art work, a story, a drawing, a video, a robot ... using both recycled material and the potential offered by Web 2.0 and open source.

The project Pinocchio 2.0 is been aimed for years to create a community for learning and to develop skills of technological nature - science, including through the implementation of robotics labs; up to now it has involved more than 2000 people (both at hospital and not):

children (kindergarten, primary school);  
adolescents (secondary school first and second degree);  
teachers, both retired and not (from kindergarten to university);  
trainees (university students);  
externals observers (from research institutes, universities, ...);  
parents, grandparents, ...;  
experts  
writers<sup>1</sup>

A basic aim of Pinocchio 2.0 is the assessment of learning arising from the use of one or more collaborative "environments", real or virtual. In addition to the "traditional" work, it also makes use of educational ICT-mediated learning that take into account:

- of need of expression and communication of students;
- of what has been done in previous years, to give continuity to the experiences already carried out;
- of guidelines, national guidelines for the curriculum;
- of educational and training opportunities offered by the development of multimedia;
- of the coordination with colleagues working in other schools in Italy and abroad.

Pinocchio 2.0 was chosen as the "fil rouge" able to connect educational and teaching proposals offered by the schools that form of the network. Pinocchio was the first "robot" that, becoming animated (not due to the results of technological research, of course, but for a strange and wonderful magic), taught something to the children.

Pinocchio is the "representative" of the "fragility of childhood." About this, the children of the schools in the hospital taking part in the project are not in front of a super hero, but a "fellow traveler". Pinocchio, although subject to the mutation of its body - as well as the children, that see their own bodies change due to the "disease," and not only to the "growth" - turns out to also be able to find a way "out" and towards the "defeat" of the illness ...

The project has brought Pinocchio 2.0 close to the Robotics Education and the ITC in an attractive, balanced, creative, funny and easy, strongly supported by direct and concrete experience resulting from the reality.

### **Timetable of the project:**

2002 Pinocchio 2.0 in virtual worlds<sup>2</sup>  
2003 Pinocchio 2.0 and robotics<sup>3</sup>  
2008 Pinocchio 2.0 in eTwinning<sup>4</sup>  
2009 Pinocchio 2.0 social networks<sup>5</sup>  
2012 Pinocchio 2.0 in Segni di Segni<sup>6</sup>  
... to be continued

This project in October 2012 was awarded the prize of the President of the Italian Republic, which is to be awarded to the most innovative projects made by Italian schools.<sup>7</sup>

#### Activities:

Meetings in person, e-mail, chat, mailing lists and other means of communication synchronous / asynchronous build bridges, nets. Social networks, wikis, blogs, podcasts, youtube videos are some of the many places in the project where there are imagination, creativity related to science, ICT, robotics and suggestions are welcomed, songs, movies, memories, trivia, games, links to material information, virtual images static, dynamic, photos, drawings, free software, "diverging stories", and much more. These sites also provide documentation (always available) of the path with the dual function of keeping the connections among the different components of the network and to always give new input to the attendees.

The project will then make use of:

- Sending e-mail to schools that are part of the network design [by all those who are included in the mailing list of the project and use it in an active form];
- Printing e-mails to colleagues who do not have access to email [by the project co-ordinator];
- Collection of materials to be sent, even by post parcel, to schools belonging to network project [by the project co-ordinator];
- Documentation online Blog MIUR project [ref. prg Web-X]
- Use of microscopes Intel® Play™ QX3™, active worlds, of microworlds, kits mindstorm robotics, open source software and social networking

The places of the project Pinocchio 2.0 change, born or die according to the will of individuals or groups. The flexibility of the instruments and, at the same time, their specificity allows different articulations of common speech and immediate access to resources.

#### Conclusions

The project is in constant evolution and we do not consider it finished. At any rate the several micro paths started within Pinocchio 2.0 have broken down the barriers of distance, not only physical (thanks to ICT), but also that inherently due to the largely different ages of the participants [from childhood to adolescence].

The advantage was the strengthening of comparison, the co-construction and sharing of different skills. We are happy to have working with us retired colleagues, experts, former students of SSIS and parents. About the students involved in the multiple paths, the project takes into account the needs of expression and communication of each, implemented by the use of various techniques.

The different "Pinocchios" made in the form of stories, drawings, artworks, are also shared across the network. The project is based on pre-existing networks of schools with experience in educational robotics. Robotics becomes an instrument, a means to create and promote collaboration among different schools, among students of different cultures and ages, including teachers and experts in the field. The technologies used in addition to the robot (imagined, designed, built and programmed) are computers, open source software, webcams, websites, youtube<sup>8</sup>, social networks, blogs, chat audio-visual, mobile phones, cameras and digital cameras.

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<sup>1</sup> Pinocchio 2.0 e le altre storie nello speciale di Education 2.0 [http://www.educationduepuntozero.it/speciali/pdf/speciale\\_dicembre2012\\_2.pdf](http://www.educationduepuntozero.it/speciali/pdf/speciale_dicembre2012_2.pdf)

<sup>2</sup> Pinocchio 2.0 ed i mondi virtuali [http://www.descrittiva.it/calip/0203/edu\\_unisa.htm](http://www.descrittiva.it/calip/0203/edu_unisa.htm) - ActiveWorlds, new solutions for the virtual (and real world) community for children <http://www.descrittiva.it/calip/nir99.html> Kids and virtual worlds [http://www.xplora.org/www/en/pub/xplora/practice/examples/kids\\_and\\_virtual\\_worlds.htm](http://www.xplora.org/www/en/pub/xplora/practice/examples/kids_and_virtual_worlds.htm) Real Children Learn in Virtual Worlds [http://www.descrittiva.it/calip/Bambini\\_reali\\_mondi\\_virtuali\\_Giannini.PDF](http://www.descrittiva.it/calip/Bambini_reali_mondi_virtuali_Giannini.PDF)

<sup>3</sup> Pinocchio 2.0 ed i primi passi nella cibernetica [http://www.descrittiva.it/calip/0304/percorsi\\_llmm.htm](http://www.descrittiva.it/calip/0304/percorsi_llmm.htm) - <http://www.descrittiva.it/calip/0405/Robolab-Colombi-Giannini-Nati.PDF>

<sup>4</sup> eTwinning è il gemellaggio elettronico tra scuole europee, un nuovo strumento per creare partenariati pedagogici innovativi grazie all'applicazione delle Tecnologie dell'Informazione e della Comunicazione (TIC). Questo il sito ufficiale <http://etwinning.indire.it/> Il progetto Pinocchio 2.0 ha ricevuto il 27/10/2010 il quality label nazionale

<sup>5</sup> Pinocchio 2.0 nei Social Network es Facebook <http://www.facebook.com/group.php?gid=139204519436108>

<sup>6</sup> Pinocchio 2.0 in Segni di Segni <http://blog.edidablog.it/edidablog/segnidisegni/>

<sup>7</sup> Pinocchio 2.0 ed il premio del Presidente della Repubblica Italiana al GJC <http://blog.edidablog.it/edidablog/segnidisegni/2012/10/21/>

<sup>8</sup> Pinocchio 2.0 su youtube <http://www.youtube.com/user/calipcalip>