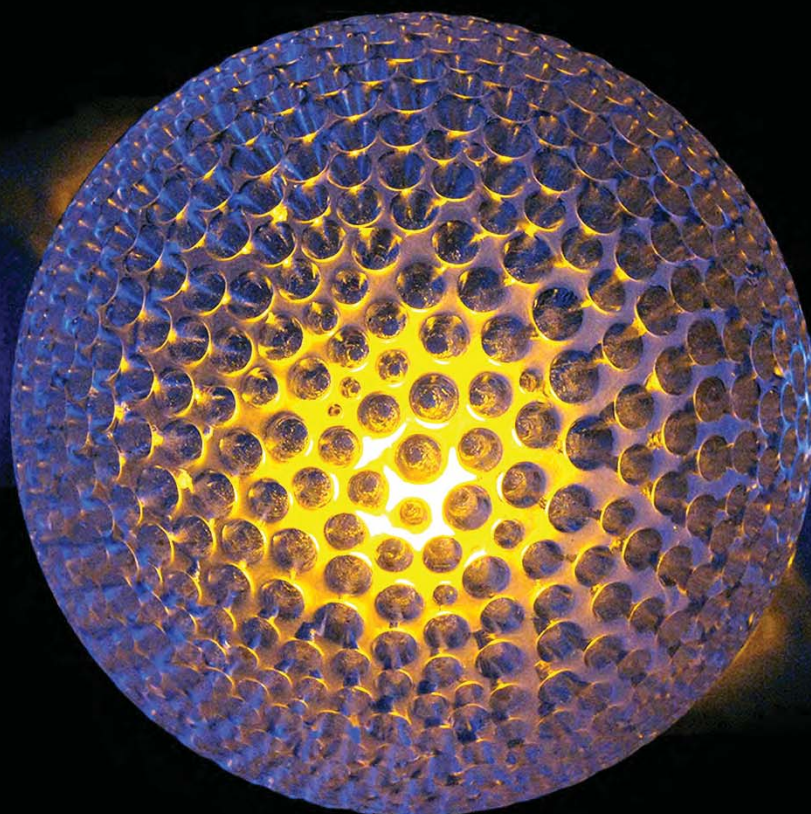




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SCRATCH DAY: FRIENDSHIP AS A MOTIVATION TO PLAY AND CREATE WITH SCRATCH PROGRAMMING

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Abstract

The “Scratch’ando com o sapo na infância” (“Childhood with Scratch in motion”) project promotes the use of Scratch programming by children from 4 to 6 years old. On 24th May 2011 was organized the Scratch Day event at “Cooperativa de Educação e Ensino A Torre” in Lisbon (<http://day.scratch.mit.edu/event/436>), where children could play alone with other children as a result of the knowledge acquired between February and May at the Scratch experiencing and training sessions tutored by the researchers of the project team and the kindergarten teacher.

The theme of the Scratch Day at “A Torre” was the friendship, which was discussed through a philosophy for children (PFC) session with four groups of children. This session was followed by the ludic social interaction and the creation of stories in Scratch. The discussion about the bonds of friendship was related to the tutorials’ characters of the “Childhood in motion with Scratch” project: Pópio, Pópia, Sylla, Argus, Bilóca, Bicuda and Friends who came from afar, available at <http://kids.sapo.pt/scratch/formacao>. At the end of the session, children were challenged to use these characters to create narratives in Scratch.

Keywords: Technology, learning, communication, children, Scratch.

1 CONTEXTUALIZATION

The Childhood with Scratch in motion project is developed with kindergarten children and aims to show how Scratch programming can promote 21st century literacy children’s skills with the mediated intervention of parents and teachers. In this way, children can learn to play with Scratch and they can play alone with other children. This project is also developed with the support of several institutional partnerships, namely: PT - Portugal Telecom/SAPO Company, University of Aveiro and Kindergarten of “Cooperativa de Educação e Ensino A Torre”, which provides study’s working place.

We are interested in promoting the use of Scratch in the Childhood Education and present a methodology to develop the spontaneous social playing, in which children play without the intervention of educators. The study involves a sample with 103 individuals from “A Torre” that are organized and distributed as follows: 50 children – divided into 2 groups of 25 children (the first group from 5 to 6 years old and the second from 4 to 5 years old); 50 adults – family members (children’s father or mother) and 3 kindergarten teachers.

The “Cooperativa de Educação e Ensino A Torre” is an educational institution where learning is understood as a dynamic process of personal and social development that includes each individual. The classrooms have a cooperative organization, where the class time is experienced as a time of dialogue and where the reflection and the creative thinking include several academic contents.

This article intends to describe and make clear the Scratch Day [1] in the Kindergarten of A Torre, this event was a fundamental strategy in the project development, since it was the culmination of the intervention-training-experiencing sessions undertaken. In the event session, different strategies was used, in order to engage children with Scratch, namely the conversational one (giving meaning to the technological mediation), face-to-face interaction (helping children by explaining, guiding and co-participating whilst answering their questions), and finally the mediated technology interaction (using the Scratch programming).

Scratch Day is an international day (Fig. 1) sponsored by the MIT Media Lab that intends to gather scratchers (people who program in Scratch) and other people, in order to learn how to program, share projects and experiences.



Fig. 1 – Official logo for Scratch Day 2011 event

Scratch Day began in 2008, on the campus of MIT, in order to gather educators, researchers, developers, and other members of the worldwide Scratch community, for sharing experiences and think about the possibilities of Scratch. Karen Brennan and Mitchel Resnick were the precursors of this event, they wanted to provide the opportunity and motivation to involve internationally scratchers, students and other people with Scratch.

It can be organized various activities for Scratch Day, such as workshops to introduce newcomers to Scratch, exhibitions, sessions where educators share experiences and all type of informal gatherings to share ideas about Scratch. In 2011 happened 126 events in 36 countries.

It was created an official site (<http://day.scratch.mit.edu/>) for planning Scratch Day events around the world (Fig. 2). On this website there are different tools to help us start planning a Scratch Day event (several resources and forums to discuss and ask questions).



Fig. 2 – World map representing the Scratch Day events around the world in 2011

The celebration of the Scratch Day in 2011 was the second event that was held in the Kindergarten of A Torre, once it was organized in 2010 a Scratch session with children's parents. On 30th June 2010 there was an opportunity to present Scratch projects made by children with 5 and six years to parents, educators and school community through an exhibition.

On this Scratch Day event, it was also possible make a session in which children shared with their parents what they have learned during two months of intervention-training-experiencing with the Scratch programming, teaching them the basic concepts of the Scratch programming. In addition, the researchers presented to parents the main functionalities of Scratch and how to download the application at <http://kids.sapo.pt>.

2 SCRATCH DAY IN “CHILDHOOD WITH SCRATCH IN MOTION” PROJECT

The “Childhood with Scratch in motion” project promotes the spontaneous social in digital platforms. The spontaneous social playing is the free and autonomous playing of children among themselves without the intervention of adults [2] [3].

In this sense, it was carried out intervention-training-experiencing sessions divided into two phases. The first was conducted with children from 5 and 6 years old, between May and July 2010, in the Scratch Club of the kindergarten, and the second one was accomplished with children from 4 and 5 years old, between March and July 2011, in the children’s classroom.

In 2011 were organized 15 intervention-training-experiencing sessions for younger children (4 and 5 years old) with the Scratch programming, in order to promote spontaneous social playing. These sessions were made with eight groups of children (3 children per group).

The iterative process of spontaneous social playing promotion through the Scratch consists of several stages. This iterative way of interactions between adults and children begins with organic social playing strategies, integrating the adult support, which then turns into assistance, and ends with children’s autonomy. Thus, it ends with the dependency resolution of children in relation to adults [2] [3]. The stages are:

Stage zero – Defining the basis for inter-institutional cooperation and familiarization with project target group;

Stage one – Inclusion of the researcher in the children’s life context (the main strategy used was the conversation);

Stage two – Supported exploration of Scratch by the target group;

Stage three – Circumscribed support to the tutorials “Pópia and Pópia” and “A day on the Farm”;

Stage four – Recreation of the tutorials with assistance;

Stage five – Exploratory and assisted play-creations;

Stage six – Spontaneous social playing with Scratch;

Stage seven – Share and disseminate the results of spontaneous social playing.

On May 24, 2011 from 10:00 a.m. until 2:00 p.m. was held the Scratch Day at “A Torre”. The main target group of the event was children of the kindergarten with 4 and 5 years old, precisely 24 kids. The session was carried out by us (the research team), with the help of the kindergarten teacher on occasions that were appearing. On this day children were in the “Stage 5”, since there was a break of approximately one month of using the Scratch programming with our help. Thus, when children interacted with the programming language they played and created with the assistance of one member of the research team.

The session was begun by a conversation with children about what they were going to do and their expectations. Actually, the session was based on the implementation of some communication strategies.

The conversation about issues of everyday life of children is the situation to give attention to children [4], to listen, to understand their ways of thinking and feeling, and to give them answers about their existence in the world. The establishment of a positive environment to communication and manifestation of the playing depends largely on the educator and researcher attitude, who develops his study in real life context with children of 3-6 years of age.

The thematic focus of the conversation [5], [6], [7], [8] sometimes arises from the initiative of the child, other times of the adult. In the Scratch Day, the conversation about friendship began with the images presentation of a spider web and a fishing net.

We show also the marked points on the world map of the Scratch Day celebrations:

A child: – “Boys and girls like us could also be playing in several cities, in several countries with the Scratch”.

A child: – “Oh, so many!”, “And we? Where are we? Where?”.

Researcher: – “Here, look, in Lisbon”; “And what is the toy that all boys and girls may be playing right now? What is it?”.

(Silence).

A child: – “Let me think... it’s Scratch!”.

Here are some children’s comments about what they think what friendship is:

“Friendship is a good thing”; “I can not explain what is friendship” “...is something that we can feel”; “...is to love a person” “...my best friend is ‘ó ó’ he takes away nighttime fears”; “...being a friend is to have friends, all the best in my class are Guilherme, Vasco, Inês, Maria, Tomás, Marta and Miguel”; “a friend think about friends”.

Another useful strategy was a yarn ball that was unrolled and each child held it. Maria says: – “I already know! Friendship is like that, we are all connected and it is hard to break the yarn.”

Then Guilherme went to get a transparent cloth and threw it onto the group. All played with the cloth for some time. The answer to the question "What is friendship?" and "How to be a friend?" was being represented by all (Fig. 3).



Fig. 3 – Children play with the transparent cloth that represents the bounds of friendship.

And the conversation continues:

Researcher: – “What are the names of the friends who are in the kids.sapo Scratch?”.

A child: – “Oh! I know, I know!”.

A child: – “I also know is Pópia and Pópio, they are friends and they play in the farm”.

Researcher: – “They play with animals: the cow, the donkey, and the sheep. They give them food”.

A child: – “I’m going to make move the handcart with the food”.

A child: – “I do not know do that”.

Then the children were challenged to play in the Scratch and find all the friends of the tutorials. With these characters they should build a story.

The children were organized in small groups that were going, in turn, to computers. This strategy was very efficient, because beyond the children have been highly motivated, they were also focused and expressed high levels of concentration.

In this way, the research team managed to get two children had access to a computer, improving the dynamics of playing, training, ability to answer questions as well as the provision of assistance to children (Fig. 4).



Fig. 4 – A group of children interact with Scratch programming.

While the children interacted with Scratch, they were also discovering new possibilities in the programming language. In this case, it was the addition of different backgrounds in the story that they were creating. The children were very excited and shared their findings with each other, helping the remaining friends to make the new activities in the program.

At the end of the session, the children shared the stories that they had developed with friends. All of them used the characters and the scenarios available at <http://kids.sapo.pt/scratch/formacao>. In Fig. 5 is shown one of the Scratch projects developed by two children on the Scratch Day.



Fig. 5 – An example of a final story developed by two children

3 FINAL COMMENTS

Considering the importance of the Scratch programming adoption to promote spontaneous social playing, we intend to provide the conditions for its use by children and educators, and with this to contribute through contents based on Human Rights for the creation of a culture supported by a reflected and critical education. In this way, the educational process should be objectively co-participated by ludic attitude and rules. The organization of the Scratch Day at the “Cooperativa A Torre” was a single opportunity to promote children’s autonomy in the creation of projects based on the friendship and fraternity values. All knew that we were celebrating the invention of Scratch, and better yet, the use of Scratch. Scratch Day was, for us, another opportunity to talk, play and be happy.

Finally, we also points out that education, in post-industrial society, implies the co-participation of children, an active listening and a careful observation by the important agents of their world. Children know what they want and what they like, but this does not mean that educators should not support and understand them, not hear what they think or not share time together. These activities allow the understanding of children’s arguments about their experience and the experience of living with others in the world, and through these conversations being able to accommodate the values that we have inherited and make us human beings. Thus, adults can not stop assisting children’s mediations while respecting the right to their privacy.

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