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Program with ScratchJr in Preschool: Kids Media Lab Project in Portugal

<http://www.nonio.uminho.pt/kidsmedialab>

Summary

Kids Media Lab - Technology and Programming Learning in Preschool Age is a post-doctoral research project in development at the University of Minho (Portugal). Participants who are part of the project belong to five districts of Portugal (Aveiro, Braga, Coimbra, Porto and Viseu) and currently cover 23 kindergartens and a total of around 500 children.

With this presentation we will introduce the Kids Media Lab project, which is inspired by the initiation into programming learning and aims to train kindergarten teachers and develop activities with the children, using ScratchJr.

In Portugal, this is a pioneering project in Childhood Education contexts and at this conference we expect to show all the work done in training education professionals on how ScratchJr can be integrated into the preschool.

Methods

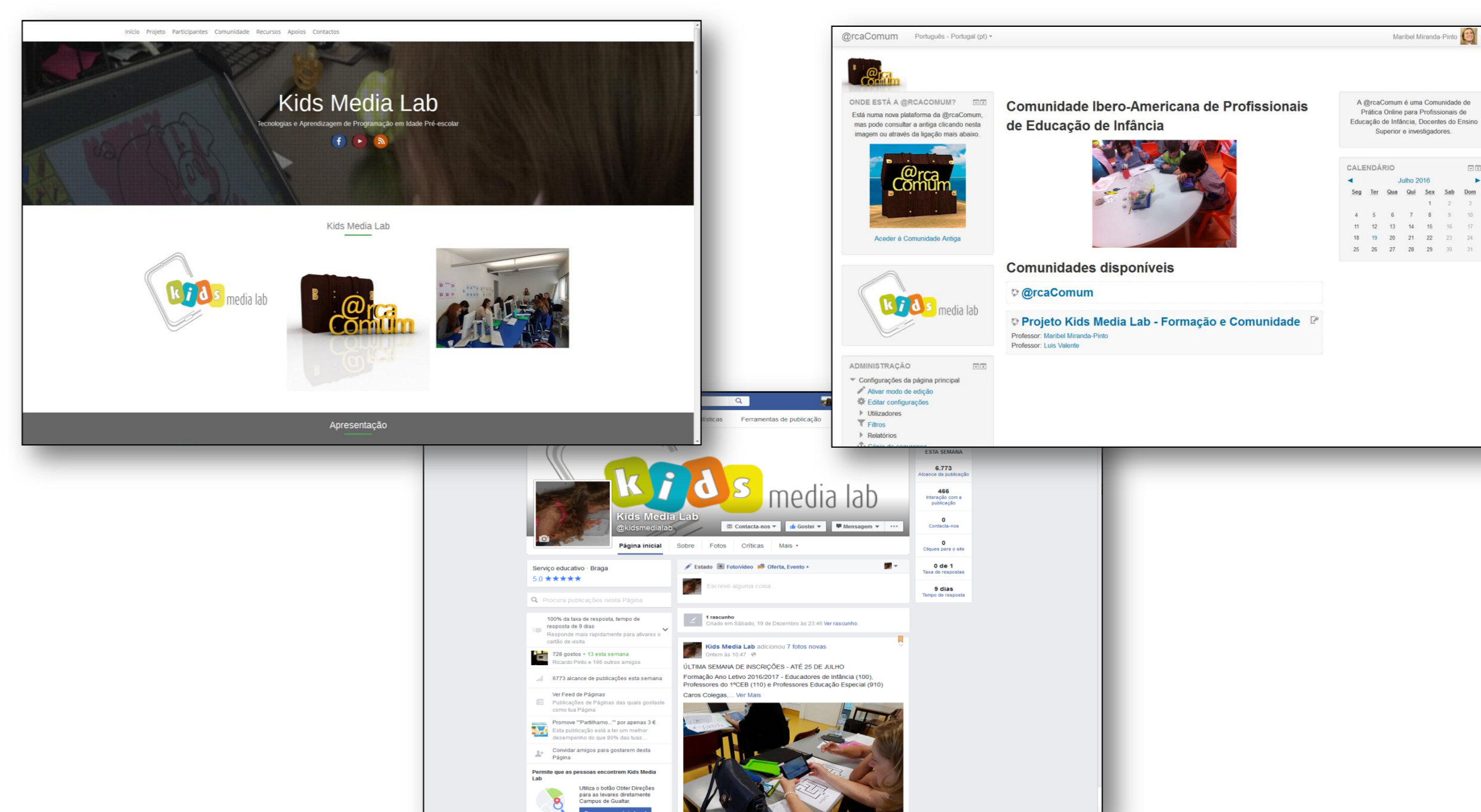
The main objective in this research is to know the learning process of programming for children in preschool through an essentially qualitative approach. We resort to multiple case study methodology, which integrates mixed assessment tools, qualitative and quantitative, in order to give greater credibility to the study and more theorizing possibilities (Amado & Freire, 2014). Recent research has turned to the multiple case study, with families and children, on the integration of programming (Lin & Liu, 2012). We designed an investigation in partnership, which allows to know and build the children's knowledge itself, like the research methodologies used by Druin (2010). The main issue of our research involves understanding: How do children learn to code in preschool?

In order for this research to materialize, we thought about creating a Kid's Media Lab, to support the project development, in which preschool children, aged between three and six years, and their Childhood Education Professionals will take part.

Training and Activities



On the Internet



Webpage: <http://www.nonio.uminho.pt/kidsmedialab>

Platform Training: <http://www.arcacomum.pt/comunidade>

Social Network: <https://www.facebook.com/kidsmedialab>

Video Channel: https://www.youtube.com/channel/UCzmHRK0bHul3v3bB_3l13PQ

Email: kidsmlab@ie.uminho.pt

Expected outcomes

We intend to prepare the programming activities and support the various educational contexts in situ and at a distance. We will seek to make regular visits to kindergartens, and to support education professionals through an online Community of Practice with resources and project support materials. The processing and analysis of data will be constant during the investigation in order to rethink potential problems and intervene in due time.

In short we anticipate the completion of the following objectives:

- Support for programming initiation activities in kindergarten;
- Provide training to education professionals involved in the project;
- Develop skills associated with children's digital literacy and with using applications on mobile devices;
- Promote creativity and imagination through the symbolic representation associated with programming;
- Integrate programming learning activities through play;
- Learn programming through Scratch Junior app for mobile devices and also through physical robot, such as KIBO robot kits;
- Understand how children learn how to code;
- Analyse and compare the different contexts of the study;
- Outline a model of integration of programming in preschool age in Portugal;
- Develop partnerships with the Ministry of Education for the integration of programming in the Childhood Education;
- Disseminate results in the national and international scientific community.

References

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Scratch@MIT - Lifelong Kindergarten Group at the MIT Media Lab

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