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Title of your session:	Computational Thinking in the Schools of Spain and Latin America: more than just a MOOC, a community
Name of presenter(s):	Xabier Basogain et al.
Type of participation:	Talk
Summary (for inclusion in the programme):	<p>The MOOC “Computational Thinking in the Schools” is a course offered through platform MiriadaX.</p> <p>The course has been designed for teachers and those interested in learning how to solve problems through the use of the programming language Scratch.</p> <p>The paper describes the creation of an active learning community and summarizes its structure and initial results.</p> <p>Participants come from 35 countries.</p>
Description:	<p>The MOOC “Computational Thinking in the Schools” is a course offered by the University of the Basque Country through the online platform MiriadaX. MiriadaX is one of the largest MOOC platforms in the world, with over one million students. For more information on the course described in this paper visit (http://goo.gl/1TGUsr)</p> <p>This MOOC uses the Scratch environment as its main teaching tool like other courses offered in Coursera (Code Yourself! An Introduction to Programming), EdX (CS002x Programming in Scratch) and Harvard Graduate School of Education (Creative Computing online workshop.)</p> <p>At the same time, this course offers a perspective that makes it different from, and complementary to the courses mentioned. The following sections describe some of the special characteristics of the MOOC “Computational Thinking in the Schools.”</p> <p>-General overview of the course The course offers a general approach to address familiar everyday problems. In particular, it highlights the use of computational thinking and computational language in the education of our youth in school.</p> <p>-Target Audience The course has been designed for those interested in learning how to solve problems in ways that are more attuned to the human capabilities. Teachers are encouraged to use the contents of the course with their students in the environment of their schools and classrooms.</p> <p>-Components of the course The course has two main components. The first is the conceptual introduction to the ideas behind computational thinking and its application in our daily environment. The second component is a practical introduction to the implementation of computational thinking</p>

through the use of the programming language and environment Scratch.

-Structure of the course

The course has been organized into 4 modules: 1) language and programming environment; 2) programming: concepts and techniques; 3) Automatic Control and Cybernetics; and 4) Life Sciences.

-Methodology

Each module is implemented with a set of video tutorials accompanied by a set of self tests. Students assess their level of proficiency through these tests. At the end of the module, a Peer-to-Peer evaluation of a Scratch project provides the final assessment.

-Community

The Peer-to-Peer evaluations and the forums are the MOOC resources designed to create and maintain the activity of the community.

The Peer-to-Peer evaluations include two phases: 1) the design of a Scratch project that develops computational thinking in the resolution of a MP (multiple process) problem; and 2) evaluation of two projects designed by two fellow students.

The forums are environments where the participants of the course become active members of the community.

-Results

When the course is completed the student is able to: a) describe daily problems in computational terms; b) apply computational techniques and procedures to solve these problems; c) create their first Scratch projects; and d) participate as active member of the community.

-Initial Data

The course started in March 4-2015, and it will conclude in May 6-2015. The participants represent over 35 countries (Spain, Colombia, Mexico, Peru, Argentina, Venezuela, Ecuador, Brazil, Chile, Dominican Republic, Bolivia, Guatemala, Uruguay, Honduras, El Salvador, Nicaragua, Puerto Rico, Portugal, Andorra, USA, Panama, Italy, ...)