Programing with no threshold and no ceiling

International UNESCO conference QED'17: Children in the digital era

September 21, 2017, Sofia, Bulgaria

Abstract

Children in the digital era are surrounded by information and communication technologies. The development of digital competences and more specifically - of programming skills, is evaluated by the society as vital for the contemporary society. This makes it natural to introduce programming courses for students of different age, new curriculum and even a new school subject – *computer modeling.*

Should the programming be taught per se though? Does the introduction of new syllabus put a *threshold and ceiling* on the performance of the teachers? What about programming languages with *no threshold and no ceiling* (the ceiling being only the user's imagination)?

Bulgaria has a long-term experience in teaching programming, and even better – in **learning through programming**. The Logo philosophy, named by Seymour Papert as *constructionism*, promotes the programming as a means for learning and creative self-expression. It is in harmony with the family of contemporary programming languages, successors to Logo and developed specially for children.

There will be *no threshold* for the participants. However, this does not mean that we would start *from scratch* (pun intended). Rather, we will start with the traditions of the Logo philosophy and Logo culture in Bulgaria, we'll present the potential of their development through Scratch and of course, we'll work, create and have fun together! Most importantly, we'll rely on *high enough ceiling*!

Target audience

Teachers, parents, students

Duration

1 hour and a half

Goals

To motivate younger and older for mathematics and art, integrated together through programing in the spirit of constructionism, the educational philosophy of Seymour Papert!

Format of the workshop

Interactive presentation, demonstration, hand-on activities т

Preliminary schedule

9:30 – 9:50	MathArt – the magic of mathematics and art in Logo style	Evgenia Sendova Nikolina Nikolova

9:50 – 10:10	Let's try together – demonstration with Scratch	Nikolina Nikolova Nikolina Nikolova
10:10 – 10:20	Registration of the participants in the Sctrach online environment.	
10:20 – 11:00	Programing, mathematics or arts – hand-on activities with Scratch	Moderators: Evgenia Sendova Nikolina Nikolova Dimitar Boev

Note:
Using your own mobiles/laptops would facilitate the practice session.

Expected outputs

Creating attitude to the programming as a means for active learning, formulating of materialized hypotheses and creative self-expression.