EIFL-PLIP

Improving lives and livelihoods through innovative public library services

knowledge without boundaries

Library's fun robotics classes build youth IT skills
### Public Library Dusan Matic - Cuprija, Serbia

The library's Biblioteka++ project teaches children and youth computer coding skills, enabling them to develop useful problem-solving software and web applications, and inspiring them to attend technical colleges and consider careers in technology. The project -

• Improved students' computer coding skills and academic performance in information technology (IT).

• Won recognition in primary and secondary schools in the towns of Cuprija and Jagodina, which adopted the library' practical approach in their classes.

• Encouraged 13 mathematics graduates of a Jagodina secondary school to enrol for further study at an IT college in Belgrade (Serbia's capital city).

• Inspired Cuprija Municipality to equip a dedicated Youth Corner in the library, and won high praise from the Mayor of Cuprija, who singled out the library as an example of good practice in offering services to benefit young people.

• Sparked interest in other libraries in Serbia, and libraries in Macedonia and Russia, which sent librarians to Cuprija to find out how to replicate the project.

• Attracted new and influential partners, including Petnica Science Centre, the biggest extra-curricular science education organization in southeast Europe.

Public Library Dusan Matic - Cuprija seeks to address two problems facing IT teachers and learners in Serbia: firstly, schools teach computer coding theory, but many do not have sufficient equipment to enable students to put their theory into practice; secondly, the tight
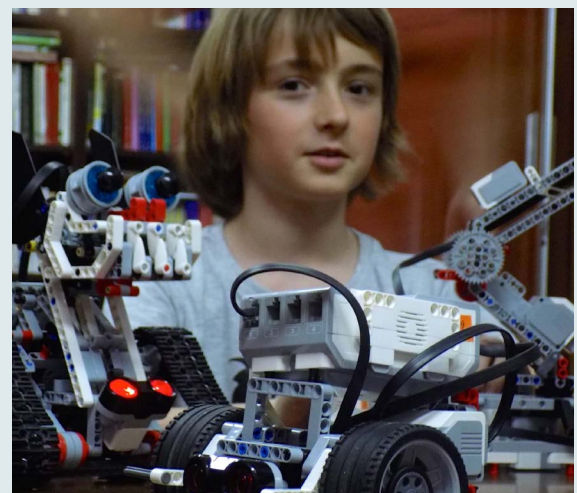
Programmed to move - a young computer programmer in the library.

"Biblioteka++ opened up many new possibilities for me to learn - now I visit the library twice a week, sometimes even more often. The library has transformed itself into a place young people would like to visit. Technology skills are extremely important for our future careers, and we now have a place to gather, learn, share knowledge, to innovate and play games in a pressure-free atmosphere."
– Nikola Spasić, secondary school student.

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school schedule means there is limited time for practical sessions. As a result, students were losing interest in IT and performing poorly in exams. Cuprija library's solution was to offer creative, practical IT workshops in a non-formal environment.

With a small grant from the EIFL Public Library Innovation Programme, EIFL-PLIP (up to US$20,000), the library equipped a computer laboratory and introduced extramural IT classes in which young people learn basic and advanced coding skills for solving problems, developing web applications and programming robots to move. The participants learn through play in fun

Girls take part in one of the library's robotics workshops in a local school.

"The library's project has inspired me to encourage students to try out new ideas and experiment through practical applications using technology."
– Zoran Milijkovic, teacher, Jagodina, Serbia.

classes that take place in the library and in schools. In just 18 months, the library –

• Organized 154 extramural workshops, in which 500 children and youth learnt practical coding skills. In addition, young learners received one-to-one guidance about possible future careers in IT.

• Created a lively website with educational resources in fun formats like games, puzzles and video - https://bpp.rs - where young people are learning new skills, sharing knowledge and showcasing their work.

• Trained three librarians and four teachers to facilitate practical robotics workshops.

• Organized two Biblioteka++ events for European Code Week 2014, after which the Serbian Ministry of Education, Science and Technological Development listed Biblioteka++ as one of the top 10 Code Week events out of over 100 participants from Serbia.

• Conducted fun robotics workshops during the popular Serbian Regional Fair for Science, Education and Culture, which attracted over 4,000 people.

The future

With support from local government, teachers, schools and new partners in the technology sector, the library's Biblioteka++ programming workshops will continue. Cuprija Municipality is creating a new cultural centre, and has agreed to provide space in the centre to accommodate new Youth Corner activities by the library. The municipality has also agreed to fund future running costs for Biblioteka++, including providing free internet access for children and young people. The library has also applied to the Ministry of Culture for a grant to expand the project.

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