

PROGRAMME 21ST CENTURY SCHOOLS

# ENGAGEMENT OF VULNERABLE CHILDREN

# EXECUTIVE SUMMARY

The British Council's '21st Century Schools Programme in the Western Balkans' has been implemented in the six Western Balkan countries with the aim to strengthen learning opportunities for students ages 10 to 15 years through development of core skills and competences, such as critical thinking and problem solving, and digital skills with focus on coding skills. Towards the end of the Programme, the British Council decided to assess the impact of the Programme on vulnerable children, since the feedback from the schools indicated beneficial effects on children with different types of vulnerabilities. The assessment was conducted by a multinational team of experts and the results are presented in this report.

**The objective** of the assessment was to collect evidence and document the impact that the programme had on vulnerable children attending regular primary schools in the countries where the programme was implemented, and to identify factors and conditions that enabled vulnerable children to benefit from the programme, as well as the barriers to their full participation. Vulnerabilities were defined in line with the OECD's cross-national classification, including children with disabilities or impairment, those with behavioural or emotional disorders, learning difficulties, but also those that are from disadvantaged groups.

The assessment is based on the analysis of 12 cases, two from each country. Four cases focus on the impact of the Programme on individuals, six cases focus on the impact on different groups of children, while two cases focus on the whole school. The cases are also diverse in terms of types of difficulties, and evidence is gathered through interviews with 89 respondents (school teachers, principals, other professionals, parents, children).

The evidence indicates that the impact of the Programme on the vulnerable children is clear and multifaceted:

- **Increased analytical and critical thinking and coding skills of the children.** The effects of the Programme were especially notable among children whose vulnerability comes from a disadvantaged socio-economic position, among girls whose engagement with digital technologies is marginal due to the still prevalent patriarchal norms transferred through socialization, directing girls more towards fields that are related to social services, humanities and arts. The beneficial effects, in terms of knowledge and skills, were more modest among children with various developmental difficulties, particularly those with more severe forms of mental disabilities.
- **Increased motivation for education and school attendance,** particularly among children with more severe learning difficulties and children from very deprived communities whose motivation was previously undermined due to the feeling of exclusion, insecurity and inequality.
- **Using Micro:bit technology in different teaching subjects improved learning of these subjects** and improved children's capacities to create links between different topics.
- **Children developed social sensitivity and empathy for their peers with disabilities** during the joint projects. This also influenced their further participation in initiatives related to supporting their vulnerable peers.
- **Increased self-confidence and educational aspirations among children** due to the acquisition of new skills, and strong sense of progress and success.
- **Increased participation in class, more proactive approach to learning** due to the new teaching methods and more interactive education techniques.

- **Improved emotional and psychological wellbeing of children with learning difficulties** as reported by parents and teachers due to the higher motivation to participate in school activities.
- **The Programme was very useful for teachers as it helped them achieve teaching objectives and made their work more interesting.** The new skills and teaching techniques also increased the motivation of the teachers and their commitment. Teachers started to evaluate their classes more regularly and to listen to students' opinions regarding the tools they had been using.
- **The Programme addressed noticeable rural/urban disparities**, encouraging children from rural areas to engage more actively, develop learning skills and improve self-confidence.

The assessment identified numerous **factors contributing to the success** among vulnerable children, including those related to the programme design (focus on practical knowledge, the novelty of Micro:bit technology, clearly defined processes, supportive role of mentors, freedom given to students to express creativity, support of British Council), factors related to students (selection of motivated students, appreciation of team work), factors related to schools (motivation and commitment of teachers, principals, good teacher-to-student ratio, previous innovation experiences, good equipment), and environmental factors (supportive families, recognition of importance of the Programme in local communities).

Some of the **inhibiting factors** identified were related to the difficulties to include coding in regular curricula in some schools, lack of supporting staff for children with disabilities, short trainings, overcrowded classrooms, lack of equipment, insufficient transfer of new knowledge and skills among teachers, the lack of parental engagement.

**Recommendations** based on the assessment are grouped in several sets:

#### **Improving curricula and learning methods:**

- It is necessary to include Micro:bit systematically in the regular curriculum because Micro:bit enables cross-curricular content connections, supports groupwork, connects students and teachers and enables teachers to achieve teaching objectives with all students; it is important to use its full potential and include it in the curricula.
- The specific methods of implementation of the Programme among vulnerable children should be based on their needs assessment, taking into account the specific type of vulnerability and adjusting methods to this type.

#### **Improving actions towards students**

- The implementation of new teaching techniques should be planned in the schools in such a way that it provides optimal dissemination to larger groups of children (inclusion of teachers that lecture multiple classes in different grades), but it should also include better transfer of new methods to other teachers through internal knowledge transfer processes.
- The implementation of programme activities or post-programme continuation of the implementation of same methods and new projects should be planned in such a way that it provides more dynamic peer-to-peer transfer of knowledge between students.
- It would be necessary to change the timeline of the Programme, to allow children to actually learn how to program. As it is now, there is not sufficient time for the students to truly learn how to code.

- It would be beneficial for an assessment of the results to be conducted, i.e. to measure student learning outcomes more precisely.
- The programme can be replicated with younger children.
- Another important area that needs to be further explored and developed is offering more peer-to-peer support when it comes to learning, because children tend to benefit more when working with someone closer to their age and interests, so that they may remain interested in the educational process and improve their integration within the school.
- Promotion of the Programme and specific techniques, as well as Micro:bit and the results achieved so far, in order to increase the interest of other schools.
- Support to girls to increase skills interest and participation in STEM education areas but not in a gender segregated way (focusing only on girls and excluding boys). Both boys and girls should be included in the programme, but the programme should be designed in the way that promotes new views on professional orientation of women, meaning their more massive entrance in STEM areas.

### Improving actions towards teachers

- In order to improve the implementation of the new CTPS techniques with vulnerable children – especially those with learning difficulties – it is important to include at least one training module on how to apply these techniques when working with these children, how to address challenges in the application of CTPS techniques, how to engage them in coding, and similar.
- Teachers also pointed out that it is important to organize more trainings on coding in order to increase teachers' coding skills, and to train them how to use digital technology and Micro:bit specifically in different subject classes.
- Teachers also expressed the desire to learn more diverse CTPS techniques.
- Teachers appreciated the mentoring support, but they recommended longer mentoring visits as they felt they needed more support for the implementation of new teaching techniques in their specific subjects or in projects.
- It is necessary to train more teachers in order to achieve large scale implementation of the programme, or to design the tools so the trained teachers can relatively easily, systematically and effectively transfer their knowledge of CTPS and Micro:bit coding to other teachers at the school.
- Pedagogical assistants, special educators should be also included in the trainings in order to provide adequate support to the teachers' work with children with learning difficulties or disabilities.
- The pedagogues should be involved in training and programme activities from the beginning of the Programme.

### Improving learning environment

- Findings related to the role of the parents indicate a need to create a more supportive learning environment for children in general, through the inclusion of the parents of children with learning difficulties in training for coding so they would be able to support their children's work at home.
- The positive attitudes of teachers and school principals regarding the implementation of the programme is a good basis for replication and upscaling. It is therefore important to

spread information and experiences of good practices among teachers in the region.

- It is necessary to improve the ICT infrastructure of the schools (premises, equipment and internet access, some Micro:bit accessories, such as sensors, etc.)
- The Programme activities and achievements should be promoted in the community by posting information about activities on school websites, Facebook pages, or through other media.

