

Intel® Skills for Innovation Case Study

Integrating technology activities in four Bulgarian schools bridges the gap between curriculum topics and real-life scenarios



By engaging in Intel Skills for Innovation Starter Pack activities, students in four Bulgarian schools have expanded the usage of technology in their learning process from only accessing contents to practicing hands-on activities tied to curriculum concepts across subjects and grade levels.

Four Bulgarian schools took part in a pilot project working with Intel® Skills for Innovation Starter Packs supported by local Intel partner for Bulgaria, Center for Creative Training:

High School of Natural Sciences and Mathematics
"Prof. Emanuil Ivanov", Kyustendil;

High School of Mathematics
"Acad. K. Popov", Plovdiv;

Language High School
"Prof. dr. Asen Zlatarov", Haskovo;

138th High School for Western and Eastern Languages
"Prof. Vasil Zlatarski", Sofia.

The focus on integrating technology within everyday learning experiences is driving tangible change in educational systems all over the world. In Bulgaria meaningful integration of technology in education has been in the spotlight for the past few years, with the Ministry of Education launching one of its biggest to-date national programs in 2020, supporting over 300 schools all over the country to build their own in-house STEM/STEAM centres.

The schools were selected to represent the local educational system and provide the most insights on how this project can be scaled further. These are all secondary schools, with a profile ranging from language studies to natural sciences and mathematics. All four schools prioritise equipping of their students with 21st century skills, a hands-on approach to learning and a focus on using digital technologies in the classroom in a meaningful way.

Vision of the four pilot schools

To engage all students to be active participants in the learning process, to equip them not only with high academic skills but also with positive and varied social experiences which will foster the development of creativity, out-of-the-box thinking, teamwork skills, and critical thinking, making them confident actors in a technology infused future.

Challenges

- Engaging students with content that is hands-on and applicable in real-life situations;
- Discovering and implementing new digital learning instruments, programs and applications;
- Fostering the development of social and emotional skills through collaborative learning experiences that motivate and inspire students.

Solution

The Intel SFI Starter Pack provides hands-on experience with using technology tools to solve real-world problems, giving educators an effective way to help students build the skills they need for future career readiness. Easy to implement with ready-to-use materials, Starter Pack activities help keep students engaged whether at home or at school. Materials include detailed, grade-level-appropriate lesson plans, presentations, and working files to be loaded into software apps.

Starter Pack activities are hosted on the Intel SFI Platform, which offers a rich, interactive, professional learning community with collaborative features that enable educators to share best practices, ideas, inspiration, and support.

"SFI is changing the learning environment, giving both teachers and students the unique opportunity to work with and through technology, enabling students to be creative. They can create something of their own that naturally immediately engages them emotionally and fosters inspiration. And not only in the students, but also in us teachers, this inspiration is observed."

Velislava Shurulinkova, teacher,
High School of Natural Sciences and Mathematics "Prof. Emanuil Ivanov",
Kyustendil

Results

Deploying the Intel® SFI Starter Pack activities in the four schools as part of the pilot project set the stage for a transformative journey which is only just beginning.

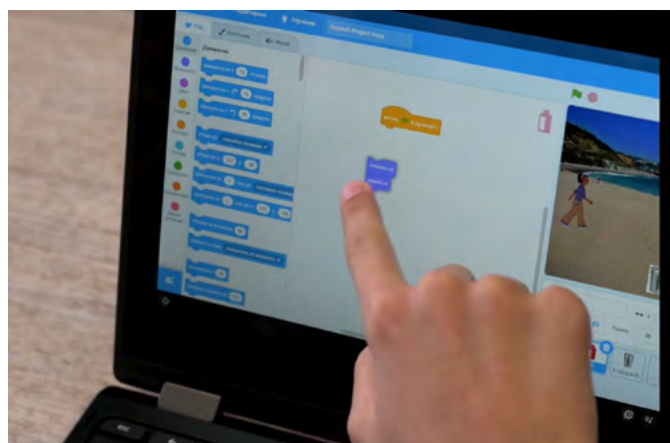
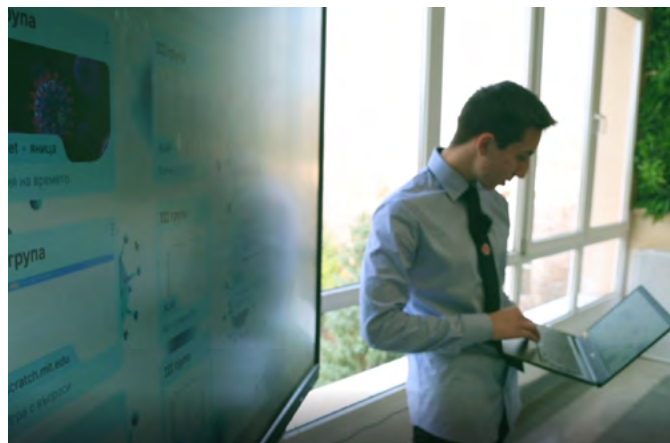
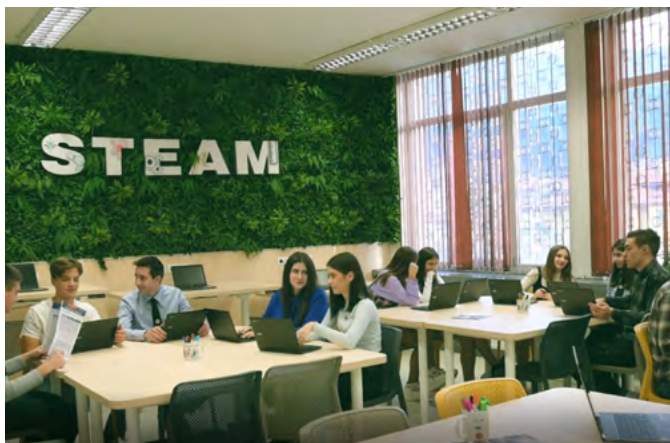
- Educators use technology projects to enhance students' social emotional skills like teamwork, leadership and resilience to failure;
- The SFI framework provides teachers with examples to initially follow and then build on to integrate technology in their everyday teaching and learning;
- Students get support in maximising their potential as future innovators; they are provided with the right mindsets for effective problem solving and the right arsenal of technology tools to devise innovative solutions to problems in all fields.

While Starter pack activities topics varied, all activities offered students an opportunity to apply classroom knowledge to real-life situations. Students and educators alike were impressed with the direct links the educational activities provided to other subjects and already available knowledge, which further enhances the appeal of project-based learning and highlights the importance of integrating multiple disciplines. The interdisciplinary lessons raised students' awareness of how different subjects can come together in order to address a real-world problem from all possible angles.

The educators carefully chose specific Starter Pack activities for their relevance to Bulgarian Ministry of Education standards, curriculum alignment, and technology accessibility. Then, supported by Starter Pack resources, they guided their students through the new experiences.

“Using the Starter Pack resources gives us the possibility to engage teachers in working on a common theme. For a week, students looked at the “Mathematics of pandemics”, and the topic engaged colleagues teaching mathematics but also geography, biology, and languages.”

Elena Minkova, teacher





Very suitable for remote and virtual learning and flipped classroom models

Working in a remote environment during the global pandemic put into focus the need for more flexibility both in and outside of the classroom. Schools in Bulgaria now more than ever realise the importance of introducing and scaling the use of technology in the educational process, which benefits both students and teachers, introducing future-ready skills that are key for the world we live in today. Intel® SFI Starter Pack proved valuable for the teachers and students, and after the initial preparation, trainings, and curriculum mapping the lessons proved to be an engaging and transformative approach to learning with technology.

“This project inspires me to be innovative, to think of all kinds of new projects and to do fun things.”

Hussein Ussein, student at Language High School
“Prof. dr. Asen Zlatarov”, Haskovo



Empowering today's students to become tomorrow's innovators

As teachers have underlined time and again that today's students are immersed in technology in their everyday lives, SFI Starter Pack activities align perfectly with the needs of students and educators in the classroom and beyond. Educators are looking for new approaches for their students; they realise that the role of the teacher needs to change to that of a mentor in order to support students to be open-minded, to tackle challenges and come up with creative solutions to real-life problems. SFI Starter Pack activities offer the opportunity to equip students with the skills required to become tomorrow's innovators, adding also soft skills to the equation.

“Skills for innovation changed my attitude towards teaching from the point of view of giving more freedom to children and not restricting them in my way of thinking and view of things.”

Gergana Penelova, mathematics teacher at High School of Mathematics “Acad. K. Popov”, Plovdiv



Supporting educators with providing meaningful learning experiences with technology

Starter Pack activities provide educators with examples to initially follow and then build on to integrate technology in their everyday teaching and learning. The lessons come with all materials needed by teachers – detailed lesson plans, ready presentations, and working files to be loaded into software apps so teachers do not need to spend time creating such working files.

Working with SFI Starter Packs enables educators to spend more time on interaction with students, focus on the importance of translating learning experiences into real-life scenarios and making sure their students also acquire the necessary soft skills such as team work, critical thinking, and creativity.

“When we have ready-made educational resources, teachers focus on the essential part of their work – how to present it to students, how to monitor their reaction, how to make adjustments in the work process.”

Elena Stoilova, Principal of High School of Natural Sciences and Mathematics “Prof. Emanuil Ivanov”, Kyustendil

Summary

The school closures prompted by the global pandemic underscored the value of adaptability in education. Now more than ever, students’ academic and future workplace success depends on developing adaptable mindsets and technological skill sets. Keenly aware of this, educators and staff at the four Bulgarian schools chose the Intel SFI Starter Pack activities to help them help their students build these essential skills. As their experience demonstrates, the Intel SFI Starter Pack simplifies technology integration in the classroom — whether virtual, hybrid, or in-person — and helps keep students engaged, at home or at school. The staff and students at the four Bulgarian schools look forward to continuing to build on their success!

Ready to Get Started?

Intel SFI Starter Pack is designed to meet the evolving pedagogical needs of educators who are preparing learners for a future workforce. The program is available under license from Intel. For more information, please contact your Intel Technology Provider.

About Intel Skills for Innovation Framework

Intel Skills for Innovation Framework empowers educators to become leaders of technology-infused learning experiences. Using the framework helps educators integrate technology into their programs and plans to build skills and help students develop their cognitive, technical, and social-emotional skills.

For more information, visit skillsforinnovation.intel.com



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