Case Study

Turkey
Intel® Learn Program

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Sinan Bastan
Teacher

The Intel® Learn Program Helps Turkish Students Acquire 21st Century Skills

Pendik, a rapidly growing industrial district of middle- and low-income families outside Istanbul, is engaged in the Intel® Learn Program. The program provides Pendik teachers and students informal educational opportunities to learn 21st century skills such as digital literacy, problem solving, critical thinking, and collaboration, which are needed to compete in a global economy. These opportunities include introducing teachers to project-based learning techniques and applications of information and communication technologies (ICT) in everyday life. Due to the success of the Intel Learn Program in its Pendik region, Turkey plans on expanding it to other regions in the next five years.

Challenges	• Teachers and students have limited access to technology • There is a need for teacher training in integrating technology in the classroom and student-centered learning approaches • There is a need for students to learn to use technology and to develop other 21st century skills such as problem solving, critical thinking, and collaboration
Approach	• The Intel Learn Program provides training for teachers in technology as well as student-centered and project-based learning approaches • The Intel Learn Program provides underserved youth with access to technology and the opportunity to learn 21st century skills through an engaging, structured curriculum
Benefits	• The Intel Learn Program helped Pendik's underserved youth gain hands-on experience with technology and learn 21st century skills that will help prepare them to successfully compete in a global economy • The Intel Learn Program's project-based approach increased students' quality of work and their collaboration with peers

In the district of Pendik on the outskirts of Istanbul, Turkey, Sinan Bastan teaches elementary school at Kurtkoy İlköğretim Okulu. Despite the demands of his job and raising a family, Bastan devotes additional time after school to the Intel® Learn Program, a community-based effort through which underserved youth are given the opportunity to gain hands-on experience with technology and learn 21st century skills such as digital literacy, critical thinking, problem solving, and collaboration.

Bastan noted there was a need for such a program. Pendik is rapidly expanding, drawing people from small villages across the country who come to Istanbul, Turkey's largest city, in search of work and opportunity. The Pendik district is populated primarily by middle- and low-income families. As in any country, low income can be a barrier to technology access and the acquisition of skills necessary to succeed in today's increasingly global and technological workplace.

So when Bastan was asked to participate in the Intel Learn Program, he agreed. He knew little about this student-centered program at the time, but was very impressed with the Intel® Teach Program, designed to help teachers integrate technology effectively in the classroom, he had previously participated in. "I liked the Intel Teach Program very much," Bastan said, "so I said yes without hesitation."

Bastan and his colleagues found some of the Intel Learn Program's approaches different from their customary way of educating students. In Turkey, education is transitioning from a more traditional method where knowledge is imparted through a format where teachers lecture to note- and test-taking students. This transition now includes the Intel Learn Program, which employs student-centered, project-based approaches set in an informal educational environment where students collaborate with each other and with staff as they investigate the use of technology in the workplace and in their community.

Bastan and his colleagues quickly warmed to the Intel Learn Program's concepts. "As time passed," he said, "we grasped the essence of the program and our initial reactions were diminished. We understood the benefits of the program when we observed the responses we received after delivering the program appropriately."

Bastan witnessed the value of the program's approaches in the students' performance. He remarks that when students had some input in establishing the rules or parameters of a project, they were more likely to follow those rules and work to meet established expectations. When they were given the chance to work collaboratively, the quality of the work improved dramatically. "I have observed many affirmative behaviors among the participating students during the courses," said Bastan.

Even Bastan's colleagues noticed positive changes in the students who participated in the Intel Learn Program. "As we have 1,500 students in our school, and I don't have the chance to follow up on all of the students that participated in the Intel Learn Program, I rely on the feedback of my colleagues," noted Bastan. "According to the feedback of other teachers, the students who participated in the Intel Learn Program became more active, more self-expressive, more constructive in their relations with friends, and they did not break the rules as often. Additionally, they requested that their teachers establish class rules jointly as we had done in the Intel Learn Program.

All the families of these students have thanked me," Bastan continued. "Many parents told me that before attending the Intel Learn Program, their kids treated computers as gaming devices; now their kids have realized that they can use computers in all aspects of life."

Bastan has since taken the concepts and approaches he learned in the Intel Learn Program and integrated them into his daytime teaching job. "I have started to practice many behaviors that I learned in this

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program in my own class," Bastan said. "I realized the importance of students setting the rules themselves and having them follow these rules. I became aware of the fact that the students don't think any differently than we do, but they only need to feel their opinions are valued. I also learned the importance of using resources systematically rather than using all of them at once. I observed that the quality of the product has increased as a result of the friendships formed by collaborative activities. Most important of all, I learned how to constructively criticize. I try to use more positive language during my criticisms at school and toward my friends and family. I've started to perceive the positive sides of people first, rather than their negative behaviors."

The new approach seems to be working for Bastan. He said, "I observe the positive outcomes. The only so-called negative result of the program is that when the subject matter is computers, these students tend to boast, 'I know the most about computers.'"

A Glimpse of Turkish Education

In Turkey, public schools make up more than 95 percent of the education landscape.[1] Children aged 6 to 14 must attend primary school. Secondary education includes general high school, as well as vocational and technical high school, all of which provide at least a three-year program for graduates of primary school.

According to Turkey's Ministry of National Education, within this year there are plans to have an IT class established in every school with more than seven classrooms. This number is quickly growing due to recent efforts to improve technology access for Turkish students. Currently, the Ministry of National Education is working on a project through which 17,000 schools throughout Turkey will be connected to the Internet with the support of the Ministry of Transportation.

While technology is becoming increasingly available in Turkish schools, educators face challenges such as how to make the best use of this newly available tool, and how to plan IT classes. As a result, the Turkish IT curriculum for primary and secondary education has recently switched from teacher-centered to student-centered learning. This change in approach is challenging for many teachers who have long employed traditional teaching methods. However, as more teachers take part in opportunities such as the Intel Teach Program or the Intel Learn Program, they become more comfortable with the concepts and learn new strategies for helping students learn crucial 21st century skills.

The Intel Learn Program in Turkey

The Intel Learn Program was introduced in Turkey in late 2005, in collaboration with the Ministry of National Education, Bilge Adam, one of the country's leading independent technology training organizations, and VERI TR, a university-based evaluation organization. The program is implemented after hours in community technology centers, often in schools with computer labs, which enables underserved youth ages 8 to 16 to learn digital literacy, problem solving, critical thinking, and collaboration skills using an engaging, project-based curriculum.

The program's approach supports the shift in national IT curriculum from teacher-centered to student-centered learning. It provides the pedagogy, concepts, and teaching methodology required by the new curriculum.

To date, more than 200 educators have been trained in 100 computer training centers in Turkey. Approximately 2,500 Turkish students have participated in the program.

The program has gained wide acceptance among teachers. Evaluation reports show that 98 percent of trained staff stated the Intel Learn Program course offering has done an excellent job of preparing them to facilitate according to a method different from more traditional methods. The data also shows that teachers feel well-prepared to engage their students in technology skills, critical thinking, and collaborative activities.

The Ministry of Education has expressed a desire to expand the Intel Learn Program throughout Turkey, and is planning to increase its support of the program by training additional staff and printing additional books with ministry resources to reach more students.

Intel has committed to setting up 350 computer training centers and training at least 700 staff members through the Intel Learn Program over the next five years, as well as providing student books for program participants.
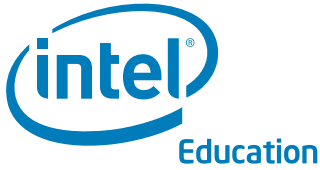
intel Education

The Intel® Education Initiative

The Intel® Education Initiative is Intel's sustained commitment to prepare all students, everywhere, with the skills required to thrive in the knowledge economy by improving teaching and learning through the effective use of technology, and advancing math, science and engineering education and research. Through a sustained public-private partnership with educators and governments in more than 50 countries, Intel works with international organizations and governments at an international, national, and local level and invests approximately USD 100 million per year in education programs adapted to address the needs of each country to advocate for 21st century educational excellence through policy work and awareness efforts.

One of these efforts is the Intel Learn Program: an after-school, community-based program in which underserved youth 8 to 16 years old learn technology, problem solving, and collaboration skills, using an engaging, project-centered approach.

Focused on meeting the needs of emerging markets, the Intel Learn Program has been launched in nine countries and has reached more than 350,000 learners. Independent evaluation results conducted by the Center for Technology in Learning at SRI International show that the Intel Learn Program supports the growth of participants' key 21st century skills like digital literacy, critical thinking, and collaboration.

- **For more information visit: www.intel.com/education**

- **For more information on the Intel® Learn Program, visit: www.intel.com/education/learn**