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Tatarstan Seeks High-Tech Edge in School With Help of Intel

By Alec Luhn

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A chemistry student at School No. 177 in Kazan performs an experiment with the aid of a laptop. **Alec Luhn**

KAZAN — Google has become a classroom tool in Tatarstan as the republic, already ranked by Forbes as Russia's best region for business, invests heavily in digital technologies for its schools in hopes of becoming the best region for education as well.

Tatarstan's annual budget for education has doubled over the past five years to 36 billion rubles ($1.2 billion), and it is spending 1.92 billion rubles over 2010-11 to develop computer-based education, the republic's education and science minister, Albert Gilmutdinov, said at the Electronic School 2011 conference in Kazan. In addition, 103.2 million rubles in federal funding is being used.

Gilmutdinov recalled the Russian saying "a miser pays twice" as he explained the republic's hefty investment in education. To be commercially successful in the 21st century, Tatarstan

will have to be well-educated, he told The Moscow Times at the conference last week.

"The more we invest today in education, the more we will get as a result of this investment tomorrow, and we will get more money to invest for the day after tomorrow," he said.

Gilmutdinov and conference co-sponsor Intel said the republic is an example for other Russian regions. The microprocessor producer has donated Intel-based computers to a Kazan classroom and conducted free teacher training in Tatarstan, said Sergei Zhukov, the Russia and CIS director of Intel's World Ahead Program, which works with governments to increase access to technology. The program's work in Tatarstan is one of its largest projects in Russia, he said.

"Out of the 83 regions of Russia, very few can boast such a well-defined strategy" for e-learning development, Zhukov said.

The republic's educational development strategy for 2010-15 includes installing computers and high-speed Internet in all of Tatarstan's 1,940 schools, purchasing digital educational content and training teachers to use the new technology. All schools will offer services such as school web sites, text messaging for parents and digital records and schedules. The region is working with partners including Intel, Google, Microsoft and the Tatarstan IT company ILC-KME CS.

The republic does not have an estimate of how much money the program will cost overall, but no matter the price tag, Tatarstan will pay it, Gilmutdinov said. Tatarstan has already purchased laptops for all of its 42,000 teachers at a cost of about 1 billion rubles, and equipping its 380,000 students with computers would cost about 10 times as much, he noted. The region has also already purchased 16,739 desktops computers for schools and 6,360 laptops for students.

Tatarstan is "in the first rank" of Russian regions in terms of information technology in schools, said Moscow Institute of Open Education rector Alexei Semyonov, who also presented at the conference. The republic's schools have even higher IT penetration than in Moscow, thanks to the policies of the current administration and its predecessor, Semyonov said.

He said Tatarstan's e-learning project is important on the national level because of the support voiced by high-ranking leaders such as Gilmutdinov and Tatarstan president Rustam Minnikhanov, who also spoke at the conference.

"That's the biggest investment," Semyonov said. "If we had that [support] in Moscow, we would have even more" e-learning in schools, he added.

Even provinces with less money than oil-producer Tatarstan can emulate its strategy, since those regions receive more federal funds, Semyonov said.

Last week's conference brought together representatives from 35 Russian provinces and educators from as far away as Singapore, which Gilmutdinov cited as Tatarstan's role model for e-learning. Numerous businesspeople also attended to promote their products for educational uses, including Alexei Shmelyov of supercomputer maker RSK-SKIF, which is

based in the Yaroslavl region. Shmelyov hopes that his company's products, including its cloud-computing technology, will eventually be used in schools and universities in Tatarstan.

"The sell period is quite long in this type of sale, and we are at the beginning of the journey," Shmelyov said.

Although Tatarstan signed a memorandum of understanding with Intel, it is not required to buy Intel-based computers, Zhukov said.

"We have been participating in the creation of a market and possibly the generation of future sales," Zhukov said.

Each year, Intel spends $100 million worldwide on programs to modernize education.

On visits during the conference to e-learning pilot schools, teachers and students lauded the classroom technology. Chemistry teacher Vitaly Stakheyev, who has a sign reading "Google is available (including exams)" on the wall of his classroom in Kazan's School No. 19, said students are "drawn into the process" through computer-based learning.

By learning how to use technology, "they will be able to solve tasks that haven't come up yet," Stakheyev said.

Tenth-grade student Dmitry Stoikov said he can learn more in class with a computer to help him visualize concepts.

"We can read a textbook, but a computer shows more," Stoikov said, as he monitored the pulse of a giant snail through a laptop.

Other students fixed English grammar mistakes on an interactive projector screen, consulted a teacher via Skype and recorded the temperature of a chemistry reaction with a computer.

Some experts, however, have voiced concern over the level of technology in schools. Although the Internet provides students with access to a far greater range of resources, left unchecked it can breed dependency, said Vadim Meleshko, deputy director of development at the Teachers' Newspaper.

"If there's no Internet ... [a student] is like a fish out of water and unable to do anything," Meleshko said.

Overreliance on IT in schools leads to the neglect of memorization skills and can also negatively impact social skills, he noted.

"Socializing on the Internet is not analogous to socializing in the real world," Meleshko said.

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