



PISA 2015 HIGH PERFORMERS

Estonia

Estonia, a small Eastern European country of 45 000 square kilometres with a population of 1.3 million, is one of the poorest OECD countries: in 2014, its per capita GDP was around USD 28 140 compared to the OECD average of USD 39 333. But Estonia has one of the strongest education systems among all OECD countries, with above-average results in PISA and almost universal access to pre-primary education. The rate of educational attainment at the secondary level is among the highest in the EU and OECD areas, while the proportion of adults holding a tertiary qualification is above the OECD average (Santiago et al., 2016).

Education is deeply rooted in Estonian culture. During the 17th century, the entire area of present-day Estonia came under Swedish rule, leading to the founding of academic secondary schools and of a university (1632). Following the Nordic War, a century later, Estonia came under Russian rule. Church leaders who had been educated at German universities and the religious ideas of Pietism continued to foster the desire for learning among the Estonian people. Many adults taught themselves to read, write and play music, skills that they then passed on to their children. As a result, relatively large proportions of the population were literate: parish records from the 18th century show that at least one in two peasants could read. According to a census from 1922, 90% of the population could read and write and another 5.3% could read only.

After a brief period of independence – from 1918 to 1941 – Estonia was incorporated into the Soviet Union between 1944 and 1991. During this time, education was made more accessible and was put at the service of industry, especially the military industry. General education curricula emphasised the acquisition of encyclopaedic factual knowledge, particularly in natural sciences, rather than problem-solving or decision-making skills. All young people received at least seven years of basic education, with the length of basic education rising eventually to nine years. Enrolments in general and vocational secondary schools grew, as did the number of university graduates.

At the time Estonia regained its independence, in August 1991, one in four persons living in the country had been born elsewhere. Today, around 70% of the total population are ethnic Estonians.

The Estonian education system

Formal education in Estonia includes pre-primary (for pupils up to 7 years old; more than 8 in 10 children between the ages of 3 and 7 participate in pre-primary education), basic (grades 1-9; ages 7 to 16), secondary (general and vocational; grades 10-12 in general education, 3-4 years in vocational education; usually ages 16-18/19) and tertiary. Basic education has three stages: grades

1-3 and grades 4-6, which comprise primary education, and grades 7-9, which is lower secondary education. Attendance at school is compulsory until the completion of basic education or until the student is 17 years old.

Student performance is assessed by national exams, sample-based national tests and regular classroom assessments. For graduation from basic school, students must reach a satisfactory level on curricular subjects and present creative work. There are also three mandatory and standardised final examinations (Estonian language, mathematics and one exam chosen by the student) to give students, parents, the school, the school leader and the state objective and comparable information about the achievement of learning goals established by the state curriculum.

The country's school system was decentralised in the early 1990s. School principals are granted considerable autonomy, including the authority to hire and fire staff, negotiate working conditions and job contracts, and make decisions about school finances, education priorities and development plans for the school (Santiago et al., 2016). The head of a school recruits teachers, supports their development and dismisses teachers, if necessary. In 2006, the Ministry of Education and Research established a mandatory requirement for schools to conduct self-evaluations at least once every three years.

Education reforms

Between the mid-1980s and mid-1990s

A teachers' congress in 1987 marks the beginning of the first period of reform. At the congress, about 1 000 teachers strongly criticised the Soviet education system and demanded greater independence for Estonian education. At the heart of their fight was the call for a new curriculum for general education. In autumn 1989, before the country regained its independence, schools where the language of instruction was Estonian were already planning lessons in line with the new curriculum inspired by this movement. After independence, the priority was to deepen and extend the curriculum reform to the whole system.

The new curriculum, which came into force in 1996, was seen as an instrument for building a democratic, dynamic, information-based society, turning towards Europe, and supporting the establishment of a market economy after decades of communist rule. The curriculum emphasised problem solving, democratic decision making, critical thinking and an awareness of personal responsibility. A key objective was instilling in students the ability to motivate, reflect on and manage their own learning. But individual syllabi were not always aligned with the overall goals of the curriculum. A revised version was introduced in 2002.

In parallel, the Education Act of 1992 affirmed the principles of comprehensive schools, legalized private education and allowed four-year post-secondary schools ("technicums") to apply for the status of applied/vocational higher education institutions.

Following independence, Estonia turned to Finland to learn about building a more effective education system. Experts from the Finnish Board of Education served as consultants in the development of the Estonian National Curriculum 1996, and some features of the Finnish curriculum, such as granting autonomy to schools for curricula and defining learning outcomes, were directly inspired by the Finnish National Curriculum.

From 1995 to 2004

The second period began when Estonia applied to become a member of the European Union and ended when it officially became one. Through the adoption of the *acquis communautaire*, i.e. the laws and other legal norms that any candidate state must adopt to become a full member of the European Union, Estonia's education system became increasingly influenced by European frameworks and policies.

From 2004 until today

Since 2003, education in Estonia has also been strongly influenced by the results of international assessments of learning outcomes. The results of the 2003 Trends in International Mathematics and Science Study (TIMSS), conducted by the International Association for the Evaluation of Educational Achievement, the 2006, 2009 and 2012 PISA results, and results from the OECD Teaching and Learning International Survey (TALIS) of 2008 and 2012 were widely published and discussed. Educators seized the country's good results in these assessments to defend child-centred progressive education ideals and highlight issues of equity in the education system.

For example, the first PISA assessment in which Estonia participated, in 2006, showed that the average science, reading and mathematics scores of students in Russian-language schools were significantly lower than those of students in Estonian-language schools. Additional resources have since been allocated to Russian-language schools.

In Estonia's integration plan for 2008-13, the government committed itself to guaranteeing equal education opportunities regardless of students' ethnic origin. Special counselling centres were established to guarantee the quality of instruction and the professional development of teachers. Russian-language upper secondary schools were required to teach subjects (other than the Russian language) in Estonian, a decision that also affected lower secondary students, since their teachers were often the same. Additional study materials were prepared for Russian-language schools to support this change. In-service courses and updated teaching materials are being provided to Russian school teachers and support their efforts to become more proficient in the Estonian language, thus allowing teachers in Russian-language schools to participate alongside teachers in Estonian-language schools in professional development activities.

Estonia has also enacted various ways of supporting weaker students and ensuring equity and inclusiveness in its education system. A yearly development interview for each student is required and schools must implement appropriate measures for students with unsatisfactory year-end marks. Hot school lunches, study books and learning materials have been provided for free to students in basic education since 2006 in an effort to promote equal access to education. All schools in Estonia must have coordinators who provide services to students with special needs. A directive adopted in 2007 mandates additional personalised support to prevent students from dropping out of education. Such support includes special needs education, speech therapy, psychological assistance and social pedagogical counselling.

These services are also provided through study counselling centres, in place since 2008. Rural schools use such services more often than urban schools, reducing inequality related to the place of residence (Kirss, 2011).

A national education plan, "Estonian Lifelong Learning Strategy 2020", adopted in 2014, emphasises the importance of competent and highly motivated teachers and school principals, calls

for an alignment of lifelong learning opportunities with labour market needs, and aims to guarantee lifelong learning opportunities for everyone, including through digital platforms (Eesti Elukestva Õppe strateegia, 2014).

Emerging problems and challenges

A recent review by the OECD (Santiago et al., 2016) identified some policy priorities to improve the effectiveness of the Estonian school system: consolidate school networks, promote professionalism of teachers and school leaders, target extra resources for students with special education needs and Russian-speaking students, and make vocational education a more attractive option.

The most critical problems of the Estonian education system are related to teachers. Teaching is not an attractive profession in Estonia – among other things, teachers have low social status – making it difficult to attract high-quality candidates, particularly prospective mathematics and science teachers. Several initiatives have been undertaken to tackle the problem, including raising teachers' salaries, creating a new, competency-based career model, establishing competence centres in universities to support professional development and research on teaching practices, and encouraging co-operation among teachers within and between schools.

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