OECD Reviews of School Resources

Estonia

Paulo Santiago, Anthony Levitas,
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OECD Reviews of School Resources: Estonia 2016

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Foreword

This report for Estonia forms part of the OECD Review of Policies to Improve the Effectiveness of Resource Use in Schools (also referred to as the School Resources Review, see Annex A for further details). The purpose of the review is to explore how school resources can be governed, distributed, utilised and managed to improve the quality, equity and efficiency of school education. School resources are understood in a broad way, including financial resources (e.g. expenditures on education, school budget), physical resources (e.g. school infrastructure, computers), human resources (e.g. teachers, school leaders) and other resources (e.g. learning time).

Estonia was one of the countries which opted to participate in the country review strand and host a visit by an external review team. Members of the OECD review team were Paulo Santiago (OECD Secretariat), co-ordinator of the review; Anthony Levitas (Senior Fellow in International Studies, Brown University, the United States), Péter Radó (Education Consultant based in Budapest) and Claire Shewbridge (OECD Secretariat). The biographies of the members of the review team are provided in Annex B. This publication is the report from the review team. It provides, from an international perspective, an independent analysis of major issues facing the use of school resources in Estonia, current policy initiatives, and possible future approaches. The report serves three purposes: i) to provide insights and advice to Estonian education authorities; ii) to help other countries understand the Estonian approach to the use of school resources; and iii) to provide input for the final comparative analysis of the OECD School Resources Review.

The scope for the analysis in this report includes early childhood education and school education (both general and vocational programmes). At the request of Estonian authorities, the focus areas of the Review of School Resources in Estonia were: i) funding of school education (including distribution, incentives and transparency); ii) organisation of the school network; and iii) the teaching profession (including improving its attractiveness). Also, issues of special needs education and vocational education are addressed from the funding perspective, i.e. how the funding system can facilitate the achievement of policy objectives in special education and vocational education. The analysis presented in the report refers to the situation faced by the education system in October 2014, when the review team visited Estonia.

Estonia's involvement in the OECD review was co-ordinated by Pärt-Eo Rannap, Head of the Finance Department, Ministry of Education and Research of Estonia together with Kadi Serbak, Analyst, and Signe Uustal, Chief Expert, both in the Finance Department, Ministry of Education and Research of Estonia. An important part of Estonia's involvement was the preparation of a comprehensive and informative Country Background Report (CBR) on school resource use authored by Kadi Serbak and Signe Uustal from the Finance Department of the Ministry of Education and Research of Estonia. The OECD review team is very grateful to the main authors of the CBR and to all those who assisted them in providing a high-quality informative document. The CBR is an important output from the OECD Project in its own right as well as an important source for the review team. Unless indicated otherwise, the data for this report are taken from the Estonian Country Background Report. The CBR follows guidelines prepared by the OECD Secretariat and

provides extensive information, analysis and discussion in regard to the national context, the organisation of the education system, the use of school resources and the views of key stakeholders. In this sense, the CBR and this report complement each other and, for a more comprehensive view of the effectiveness of school resource use in Estonia, should be read in conjunction.

The OECD and the European Commission (EC) have established a partnership for the Project, whereby participation costs of countries which are part of the European Union's Erasmus+ programme are partly covered. The review of Estonia was organised with the support of the EC in the context of this partnership. The EC was part of the planning process of the review of Estonia (providing comments on Estonia's CBR, participating in the preparatory visit and providing feedback on the planning of the review visit) and offered comments on drafts of this report. This contribution was co-ordinated by Krzysztof Kania, Country Desk Officer for Estonia as regards education and training, working within the "Country Analysis" Unit of the Directorate for "Lifelong Learning: horizontal policy issues and 2020 strategy", which is part of the Directorate General for Education and Culture (DG EAC) of the European Commission. The review team is grateful to Krzysztof Kania for his contribution to the planning of the review and also for the helpful comments he provided on drafts of this report.*

The review visit to Estonia took place on 20 to 27 October 2014. The itinerary is provided in Annex C. The visit was designed by the OECD (with input from the EC) in collaboration with Estonian authorities. It also involved a preparatory visit by the OECD Secretariat on 26 to 27 June 2014, with the participation of Krzysztof Kania, from the EC. The review team held discussions with a wide range of groups at all levels of government (central and municipal). At the national level, the review team met with Jevgeni Ossinovski, Minister of Education and Research; other officials of the Ministry of Education and Research; the State Chancellery; Ministries in charge of public expenditure; funding and quality assurance agencies; other relevant agencies dealing with the use of school resources; student associations; teacher associations; representatives of municipalities and cities; representatives of the private school sector; organisations representing the interests of students with special needs; representatives of providers of teacher education; and researchers with an interest in the effectiveness of school resource use. At the municipal and city levels, meetings were held with educational and finance authorities of the cities of Narva, Tallinn, Tartu and the municipalities of Jõhvi and Vaivara. The team also visited a range of schools in different municipalities, interacting with school management, teachers and students. The intention was to provide the review team with a broad cross-section of information and opinions on school resource use and how its effectiveness can be improved. Overall, the OECD review team held 45 meetings and interviewed about 200 individuals.

The OECD review team wishes to record its gratitude to the many people who gave time from their busy schedules to inform the review team of their views, experiences and knowledge. The meetings were open and provided a wealth of insights. Special words of appreciation are due to the co-ordinators, Pärt-Eo Rannap, Kadi Serbak and Signe Uustal, for going to great lengths to respond to the questions and needs of the review team. The review team was impressed by their efficiency and expertise. The courtesy and hospitality extended to us throughout our stay in Estonia made our task as a review team as pleasant and enjoyable as it was stimulating and challenging.

The OECD review team is also grateful to colleagues at the OECD, especially to Francesc Masdeu and Thomas Radinger for analytical support. Eleonore Morena provided key administrative, editorial and layout support. Deborah Nusche provided advice while Yuri Belfali provided guidance and support.

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This report is organised in five chapters. Chapter 1 provides the national context, with information on the Estonian school system, main trends and concerns as well as recent developments. Chapter 2 analyses the governance of schooling and the organisation of the school network. Chapter 3 reviews approaches to school funding. Chapter 4 examines school organisation and operation while Chapter 5 looks at the management of the teaching workforce. Each chapter presents strengths, challenges and policy recommendations.

The policy recommendations attempt to build on and strengthen reforms that are already underway in Estonia, and the strong commitment to further improvement that was evident among those the OECD review team met. The suggestions should take into account the difficulties that face any visiting group, no matter how well briefed, in grasping the complexity of Estonia and fully understanding all the issues. Of course, this report is the responsibility of the OECD review team. While the Team benefited greatly from the Estonian CBR and other documents, as well as the many discussions with a wide range of Estonian personnel, any errors or misinterpretations in this report are its responsibility.

Table of contents

Acronyms and abbreviations 11

Executive summary 13

Assessment and recommendations 17
Education system context 17
Strengths and challenges 18
Policy recommendations 26

Chapter 1. **School education in Estonia** 35
Context 36
The governance of the school system 42
The organisation of the school system 46
Main trends and concerns 63
Notes 67
References 67

Chapter 2. **Governance of schooling and the organisation of the school network in Estonia** 69
Context and features 70
Strengths 78
Challenges 82
Policy recommendations 94
References 103

Chapter 3. **Funding of school education in Estonia** 105
Context and features 106
Strengths 125
Challenges 133
Policy recommendations 142
Notes 151
References 152

Chapter 4. **School organisation and operating schools in Estonia** 155
Context and features 156
Strengths 170
Challenges 178
Policy recommendations 184
Notes 189
References 189

Chapter 5. **The teaching workforce in Estonia** 191
Context and features 192
Strengths 203
Challenges 210
Policy recommendations 215
References 221

Annex A. **The OECD Review of Policies to Improve the Effectiveness of Resource Use in School** 223
Annex B. **Composition of the OECD Review Team** 224
Annex C. **Visit programme** 226

Tables

1.1. Counties of Estonia 37
1.2. 2020 targets established by the Lifelong Learning Strategy 45
1.3. Number of schools and students, by ownership, pre-primary education, 2004/05 to 2013/14 48
1.4. Number of schools by ownership, general education, 2005/06 to 2013/14 50
1.5. Number of students by education level and school ownership, general education, 2005/06 to 2013/14 51
1.6. Number of schools and students in vocational secondary education by school ownership, 2007/08 to 2013/14 53
1.7. Number of general education schools by type, 2013/14 54
1.8. Number of schools for special education and respective enrolment by ownership, 2008/09 to 2013/14 59
1.9. Number of students with special educational needs, by type of provision and type of curriculum, 2007/08 to 2013/14 60
3.1. Percentages of public and private funding of education, 2011 108
3.2. Expenditure per student, by level of education, 2011 109
3.3. Compensation of staff and capital expenditure as shares of current and total expenditure, primary and secondary education, 2011 109
3.4. Investment priorities and specific objectives for education in the Operational Programme for Cohesion Policy Funds 2014-2020 121
3.5. Annual expenditure per student by educational institutions relative to GDP per capita, Estonia and comparator countries, 2011 125
3.6. Number of students and schools, general education, 2005/06 and 2013/14 . . . 128
3.7. Number of schools, students and teachers, 2008/09 and 2013/14 129
3.8. Jurisdictional fragmentation and average class sizes, 2013 137
4.1. Proportion of decisions taken at the school level in public lower secondary education, 2011 157
4.2. Advisory and decision making bodies in Estonian schools 158
4.3. The school's role in deciding teachers' professional development activities, lower secondary education, 2013 162
4.4. Profile of Estonian school leaders in international comparison, TALIS 2013 and 2008 164
4.5. Regulations on class size in Estonian schools 166
4.6. School leader reports on concerns with school educational materials 168
4.7. Extracurricular activities offered by schools 170
4.8. School leader reports on staff shortages in international comparison 184
5.1. Monthly teacher salaries, in EUR, 2005-14 196
5.2. Number of support specialists, 2013/14 202

Figures

1.1. Estonian population pyramid in 1990 and 2014 38
1.2. Number of births from 1988 to 2013 and forecast to 2023 39
1.3. Variation in school age population in Estonia compared to the OECD and the EU 40
1.4. Evolution of GDP growth in Estonia and the OECD, 1996-2013 41
1.5. The Estonian education system 47
1.6. Number of children enrolled in pre-primary education, by type of ownership, 2004/05 to 2013/14 49
1.7. Number of children enrolled in primary, lower secondary and general upper secondary education, 2005/06 to 2013/14 51
1.8. Distribution of general education students according to school ownership, 2005/06 and 2013/14 52
1.9. Number of children enrolled in vocational education at secondary level by school ownership, 2007/08 to 2013/14 53
1.10. Distribution of students according to language of instruction, primary and lower secondary education, 2007/08 and 2013/14 56
1.11. Distribution of students according to language of instruction, upper secondary education, 2007/08 and 2013/14 57
1.12. Number of students with special educational needs, by type of provision, 2007/08 to 2013/14 61
1.13. Highest educational attainment of young adults (25-34 year-olds), 2012 65
2.1. Percentage of decisions taken at each level of government in public lower secondary education, 2011 71
2.2. Average number of students per school, by type of ownership, general education, 2008/09 to 2013/14 74
2.3. Average net area per student (m^2), by school type and setting, general education, 2013/14 75
2.4. Number of general education institutions by Estonian or Russian language of instruction, 2007/08 to 2013/14 78
2.5. Proportion of students with special educational needs according to learning setting, 2007/08 and 2013/14 86
2.6. Framework for the inclusion of special needs children 89
2.7. Choices made by basic education graduates according to the language of instruction in basic school, 2014 90
2.8. Proportion of basic education graduates entering vocational education the year after graduation according to the language of instruction in basic school, 2010-14 91
3.1. Public expenditure on education as a percentage of GDP, 2005-11 106
3.2. Public expenditure on education as a percentage of total public expenditure, 2005-11 107
3.3. Public expenditure by level of education as a share of GDP, 2011 108
3.4. General and local government public expenditure as a percentage of GDP, average 2008-12 110
3.5. Sources of public funds for primary, secondary and post-secondary non-tertiary education, 2011 111
3.6. Composition of local government expenditure, in million EUR, 2008-12 112
3.7. Composition of local expenditure on pre-primary and primary education, and secondary education, 2004-12 113

3.8. Composition of local government revenue, 2013 113
3.9. Allocation of the equalisation fund by county in EUR per capita, 2010 115
3.10. Flow of funding from the state to primary and general secondary schools through municipalities 116
3.11. Number of students per full-time equivalent teacher, general education, 1997/98 to 2012/13 134
4.1. School leader reports on school responsibility for resource management, 2012. 160
4.2. Average net area per student (m^2) across school types, general education, 2012. 167
4.3. Average net area per student (m^2) across school types, general education, 2013/14 169
4.4. School leader reports on formal training, lower secondary education, 2013 . . 178
4.5. Reported frequency of pedagogical leadership activities. 180
4.6. Reported frequency of classroom observation by school leaders 181
4.7. Indicators of relative attractiveness of school leader salaries, 2013/14 182
5.1. Monthly teacher salaries, 2005-14 197
5.2. Change in lower secondary teachers' salaries, 2000, 2005 and 2012 198
5.3. Number of hours teachers report having worked during the most recent complete calendar week, lower secondary education, 2013 199
5.4. Number of hours teachers report having spent on the following activities during the most recent complete calendar week, lower secondary education, 2013. 200
5.5. Teacher annual salaries at start of career and at top of the scale, lower secondary education, public institutions, 2012 203
5.6. Teachers' salaries relative to earnings for tertiary-educated workers aged 25-64, public institutions, pre-primary and lower secondary education, 2012. 204
5.7. Type of professional development recently undertaken by lower secondary teachers, Estonia and TALIS average, 2013 209
5.8. Percentage of teachers whose school principal reports that the following resource issues hinder the school's capacity to provide quality instruction, lower secondary education, 2013. 211
5.9. Barriers to teachers' participation in professional development, lower secondary education, Estonia and TALIS average, 2013. 214
5.10. Teachers' needs for professional development, lower secondary education, Estonia and TALIS average, 2013 216

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Acronyms and abbreviations

CBR	Country Background Report
DG EAC	Directorate General for Education and Culture
EC	European Commission
ERDF	European Regional Development Fund
ESF	European Social Fund
EU	European Union
GDP	Gross Domestic Product
ICT	Information and Communication Technologies
ISCED	International Standard Classification of Education
LLS	Estonian Lifelong Learning Strategy 2020
MTEF	Medium-Term Expenditure Framework
NAO	National Audit Office
OECD	Organisation for Economic Co-operation and Development
PIAAC	OECD Programme for the International Assessment of Adult Competencies
PISA	OECD Programme for International Student Assessment
PIT	Personal Income Tax
SDP	School Development Plan
SEN	Special Educational Needs
TALIS	OECD Teaching and Learning International Survey
TIMSS	Trends in International Mathematics and Science Study
UNDP	United Nations Development Programme
VET	Vocational Education and Training

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Executive summary

The Estonian school system is high-performing and has accomplished significant achievements. Coverage rates in pre-primary education are high and participation in schooling is almost universal. Secondary-school attainment of the adult population is among the highest within the OECD area while the proportion of adults holding a tertiary qualification is above the OECD average. Also, the performance of students in international assessments at the secondary level is among the best in Europe in reading, mathematics and science and has improved significantly in the last few years. However, a significant proportion of young adults do not have a professional or vocational qualification and rates of completion in vocational education are low. Also, while at the secondary level students' socio-economic background has a smaller impact on performance in Estonia than in other OECD countries, there remain concerns about the performance of students in Russian language schools (in spite of some recent improvement).

Estonia has launched significant initiatives to improve the quality of the education system. These include adjustments to the mechanisms of school financing, the establishment of the Estonian Lifelong Learning Strategy 2020, the 2011 curricular reform in general education, the 2013 new standard for vocational education and the introduction of a new competency-based career system for teachers. In this dynamic policy context, there is an apparent desire to improve the use of school resources. This report analyses the use of resources in the Estonian school system, with a particular focus on the organisation of the school network, the funding of school education, school organisation and operation, and the teaching workforce. It identifies policy areas with potential efficiency gains or requiring further public investment.

The following policy priorities were identified to improve the effectiveness of resource use in the Estonian school system.

Further consolidate the school network

Estonia operates an extensive school network able to ensure full access to education. Especially, there is a strong emphasis on providing access to early education in rural areas. However, there is room to accomplish efficiencies in the Estonian school system. The size of the student population has contracted considerably while the sizes of the school network and the teaching workforce have not adjusted to the same extent. As a result, there are many small schools with small classes in Estonia. In this context, and given the current demographic , the further consolidation of the school network is inevitably a policy priority. Developing planning capacity, co-ordination mechanisms and inter-municipal collaboration is cornerstone to create a more efficient and equitable school network. This could be organised through regional planning platforms covering all levels of school education and involving all relevant stakeholders. Municipal co-operation could involve

the co-management of basic schools across municipalities, improving transportation services and the common use of various facilities. The consolidation itself may involve a range of different strategies. One possibility is to close or consolidate small schools, or reduce services within schools with due consideration to the costs and feasibility of different alternatives such as transporting students and housing them at boarding schools. Another possibility is that nearby schools share resources. A further possibility is the clustering of schools, which involves the conversion of several nearby small schools into satellites of one educational institution with a single leadership team and budget.

Also, the national government's policy of not allowing municipalities to create new schools that combine the teaching of primary and lower secondary education with Years 10-12 is to be supported. However, the implementation of the "recentralisation" of the management and funding of general upper secondary education, supported with the construction of new state-run *gymnasiums*, is faced with a number of challenges and needs to proceed with considerable caution. An option to be considered in order to consolidate the school network is the specification of a threshold class size or average school class size below which students would not be funded from the state grant, unless the school is identified as meriting "protection" in order to maintain student access in remoter areas. Within the extent of the state funding resulting from the regulated average minimum class size, school owners and schools would retain their autonomy on class organisation, including in deciding the actual size of specific classes within schools. This could possibly be assisted with extra resources coming from the school owner's own revenues.

Make vocational education a more attractive option and improve its efficiency

The Estonian government is adequately placing increasing emphasis on strengthening the mechanisms for the vocational education and training (VET) system to adjust to changing labour market needs. However, vocational education is faced with a number of challenges including its low status among students and parents, high drop-out rates and few opportunities for students to engage in work-based learning and apprenticeships. Improving the attractiveness and efficiency of vocational secondary education involves making programmes more relevant for the labour market and for regional development, further involving employers and improving student completion rates. A holistic strategy could combine: a funding approach that gives institutions more stability and better incentives to improve completion rates; improved career guidance for students; more committed engagement from employers, including with their contribution to the funding of VET; and ensuring regional development strategies are taken into account.

Target extra resources for students with special educational needs and Russian-speaking students

Though Estonia has a well-developed network of special education schools (SEN schools) and programmes, relatively little progress has been made in integrating children with special educational needs into regular classes in mainstream schools. The solution lies, in part, in increasing the financial support given to mainstream schools for SEN students. In this way, the national government should review the coefficients used to provide additional revenue to mainstream schools for teaching SEN students in both mainstream and special classes. These coefficients should make it possible for schools to hire well qualified teaching assistants to work in integrated classes. It is also important that funding for SEN students in mainstream schools is earmarked and that there are

effective ways to monitor its use to facilitate the integration of SEN students in regular classes. The expansion of effective inclusive education will also require SEN schools to enlarge their functions to support both SEN students being educated inclusively in mainstream schools and teachers providing inclusive education in these schools. The other key component of a strategy for inclusive education is adequately preparing teachers in mainstream schools to provide effective inclusive education.

Language acquisition problems clearly pose barriers to, and raise the costs of Russian-speaking students advancing through Estonia's education system. As such, they run against Estonia's commitment to equal opportunity and fair treatment. Language barriers are likely to distort the choice of upper secondary programmes by Russian-speaking students in favour of vocational programmes, and thus ameliorating the basis for this choice would probably improve the efficiency of the system as well. Hence, the national government should consider developing an earmarked grant designed to provide financial support to municipalities and schools for the additional hours of Estonian language instruction necessary to make Russian-speaking students proficient in the country's official language.

Promote school leadership through further professional support

School leaders are recognised as a key resource and their professional development is considered crucial. This reflects the high levels of autonomy provided to school leaders in delivering the curriculum and managing resources. However, the position of "school leader" is perceived as unattractive and compensation is inadequate. Also, no systematic mechanism to provide professional feedback to school leaders is available. There is no central framework for school leader appraisal and appraisal is not mandatory. Hence, there is a clear need to make the school leadership position more attractive and this requires re-thinking of the school leader career and finding ways to make leadership positions more financially attractive. Steps in making the profession more attractive may include: a distinct career structure for school leadership (linking career progression to specific leadership responsibilities as underpinned in school leader professional standards); an independent salary scale for school leadership; and appraisal results to inform career advancement. Also, there is a pressing need to develop and ensure implementation of a regular and more coherent approach to school leader appraisal. The challenge is to develop appraisal processes, frameworks and conditions that do not require an excessive investment of time and effort, that serve as an effective tool for improving practices and that are perceived as useful and relevant by school leaders.

Enhance the use of teacher resources in the school system

In Estonia, there is considerable autonomy for the management of the teaching workforce at the local level. This is a strength in a system where schools are individually judged on their ability to improve student learning. Teacher appraisal processes internal to the school are established, include the observation of practices in the classroom and have an impact on the professional development of teachers. There are also indications that there is no inequitable distribution of teachers across schools and school locations. A positive development has been the introduction of a new competency-based teacher career structure but its potential is not being adequately used. At this stage it essentially remains a voluntary instrument to formally recognise teacher competencies and with no direct association with compensation and the specific roles performed at the school. Teacher professional development is well established even if its operation raises a number of

concerns such as its limited links to teacher appraisal and the insufficient relevance of programmes. Finally, the criteria used to establish teacher compensation, partly defined at the school level, lack transparency. In this context, it would be beneficial to make external periodic teacher certification a requirement for teachers using the existing competency-based career structure. The idea is that the certification process (alongside the competency-based career structure) is integrated, in ways to be defined by individual schools, in school-based approaches to human resource management. This would involve requiring schools and/or municipalities to design salary scales which recognise the competency-based career structure defined nationally. In parallel, the emphasis on school-based teacher appraisal, which is predominantly for teacher development, should be maintained and strengthened. A further priority should be to ensure the relevance of professional development programmes through their accreditation.

While there is a need to both ensure the continuous entry of new talent into the teaching profession and to constantly motivate in-service teachers, there is no need to increase the overall size of the teaching workforce. On the contrary, the needed school consolidation is likely to require a certain degree of teacher redundancy. This entails developing strategies for reallocating, redeploying and retiring teachers currently employed in schools who will be affected by school (or class) consolidation. Also, given that not a lot of new teaching posts are likely to be available in the coming years, it is clear that entry into preparation programmes can be much more selective to ensure only high-quality graduates fill the available teaching posts.

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Assessment and recommendations

Education system context

The school system has accomplished significant achievements but some concerns remain

The Estonian school system is high-performing and has accomplished significant achievements. Coverage rates in pre-primary education are high and participation in schooling is almost universal. Secondary-school attainment of the adult population (aged 25-64) is among the highest within the OECD area while the proportion of adults holding a tertiary qualification is above the OECD average. However, the gender gap in Estonia is among the widest in the OECD area, with a much greater proportion of women completing a tertiary qualification. Adults have literacy and numeracy skills above the OECD average and the performance of young adults is comparatively better. By contrast, the proportion of adults with high performance in problem solving in technology-rich environments is below the OECD average. The performance of students in international assessments at the secondary level is among the best in Europe in reading, mathematics and science and has improved significantly in the last few years. This goes alongside one of the smallest shares of low performers in mathematics, reading and science. However, a significant proportion of young adults do not have a professional or vocational qualification and rates of completion in vocational education are low. Also, while at the secondary level students' socio-economic background has a smaller impact on performance in Estonia than in other OECD countries, there remain concerns about the performance of students in Russian language schools (in spite of some recent improvement) and some significant performance differences exist between schools depending on their location. Finally, the integration of students with special education needs into mainstream education remains limited.

Significant policy initiatives were launched, in part to respond to efficiency challenges in the school system

Estonia has launched significant initiatives to improve the quality of the education system and is increasingly looking to international standards and best practices. Policy initiatives include the ongoing redefinition of responsibilities for education across administration levels, adjustments to the mechanisms of school financing (per capita funding scheme), the establishment of the Estonian Lifelong Learning Strategy 2020 as the main reference for education policy, the 2011 curricular reform in general education, the 2013 new standard for vocational education, the creation of new regional counselling centres and the introduction of a new competency-based career system for teachers. In this dynamic policy context, there is an apparent desire to improve the use of school resources, the recognition that the school network's efficiency can be improved and a

consensus about the need to better compensate education professionals. This report analyses the use of resources in the Estonian school system, with a particular focus on the organisation of the school network, the funding of school education, school organisation and operation, and the teaching workforce. It identifies policy areas with potential efficiency gains or requiring further public investment. The following policy priorities were identified to improve the effectiveness of resource use in the Estonian school system.

Strengths and challenges

There is commitment to invest in education while pressures for further funding and inefficiencies can be identified

Estonia spends about the same proportion of gross domestic product (GDP) per capita than the OECD average on primary and lower secondary education and two percentage points more on upper secondary education. However, it spends considerably less, as a proportion of GDP per capita, on pre-primary education, with possible implications for the quality of the services offered. Good levels of public spending on education relative to the country's resources has allowed Estonia to provide free textbooks and school lunches, and relatively easy physical access to primary and secondary schools. Estonia has an extensive network of special education schools and programmes that ensure that children with special needs have access to public education. It has also made major investments in vocational education and is clearly committed to developing an effective system for lifelong learning. Also, though teachers' salaries remain relatively low, the national government has significantly raised them over the last few years.

In the coming years, a range of initiatives will put pressure on the public purse. These include free tuition for tertiary education students (conditional on student performance); the commitment to further raise the salaries of primary and secondary school teachers; demands to increase the salaries of pre-primary education teachers; the need to make investments in the rationalisation of the school network; and the need to modernise vocational education. At the same time, there is room to accomplish efficiencies in the Estonian school system. The size of the student population has contracted considerably (about 22% between 2005/06 and 2013/14) while the size of the school network (and of the teaching workforce) has not adjusted to the same extent. As a result, there are many small schools with small classes in Estonia. Analysis of class size and student-teacher ratios in Estonia also provide indications that, compared to the situation in other OECD countries, on the whole, Estonia has an oversupply of teachers. This has put pressure on both the national government and municipalities to rationalise resource use across the school system.

The school network ensures full access to education but its further consolidation is needed

Estonia operates an extensive school network able to ensure full access to education. Especially, there is a strong emphasis on providing access to early education in rural areas. There are guarantees in place that pre-primary and primary education can be provided locally. However, the dramatic demographic decline of the last twenty five years has resulted in the existence of too many small schools and small classes. Under the pressures created by the funding system, the adjustment of the school network has already started. The decrease of the number of schools and teachers is slower than the decrease of the number of school age students but it shows some capacity of the decentralised system to adapt to the demographic changes. The funding formula has exerted some pressure on municipalities to rationalise their school networks in the face of declining student enrolment.

The need to further consolidate the school network is recognised by all key stakeholder groups. At the same time, the government is strongly committed to the further consolidation of the school network as demonstrated by its direct intervention in general upper secondary education, the creation of incentives for municipalities to consolidate their schools, the steering of a part of EU structural and investment funds towards improvement in educational infrastructure and its readiness to take over the responsibility for a part of educational expenditures so far covered by municipalities. The national government is rationalising the network of general upper secondary schools by creating a new state-run *gymnasium* in every county capital. The objective is that these new state-run *gymnasiums* will not only make the system more efficient, but also make it possible to provide all general upper secondary school students with quality instruction. However, this policy may multiply capacities that maintain competition between state and municipality-owned schools for the limited and declining number of students. At the same time, the national government is also providing some incentives for municipalities to consolidate their general upper secondary school networks. Municipalities that reorganise their school networks by reducing or eliminating the number of schools that provide general upper secondary education are eligible for special investment grants. The national government also fully covers the cost of transportation of students who commute from another municipality to attend one of the new state-run *gymnasiums*. Investments will also be made to improve dormitories for commuting students.

Governance arrangements make efficiency improvement challenging

The distribution of responsibilities between the state and the municipalities for the provision of public education services is complex and leads to an unclear distribution of responsibilities. In fact, the municipal and the state-owned schools engage in competition in general education, in special needs education and – to a lesser extent – in vocational education and training. This results in declining clarity of the responsibilities for setting the funding rules and for leading the school consolidation process.

A range of efficiency concerns arise from current arrangements for the governance of schooling. The administrative capacities of most school providers (especially small municipalities) are relatively weak; many of them rely on the capacity of school leadership. Furthermore, jurisdictional fragmentation is making it harder for Estonia to rationalise its secondary school facilities because many of its municipalities are too small to maintain effective and efficient secondary schools, and in some cases basic school facilities. Indeed, particularly in lower secondary education, education effective provision can be organised only through inter-municipal co-operation which allows the sharing of resources (for example teaching capacities, special children services or extracurricular facilities) between institutions. However, in Estonia, incentives for inter-municipality co-operation are weak. This is reinforced by the fact that county level education departments have little power to assume co-ordination responsibilities as they are not perceived by municipalities as a legitimate partner for school governance. There is also some rigidity in school-level provision across levels of education, such as the frequent separation between pre-primary education and primary education, or the separation between general education and vocational education and training. This makes it difficult for subsystems to share resources and also hinders the smooth shift of resources from one subsystem to the other when needed in function of demographic changes, emerging new needs, existing inefficiencies and changing policy priorities.

The ambiguous distribution of responsibilities is reinforced by the funding system. The per capita funding formula has been so weighted as to create a common misconception that the existent structure of the school network is – and will be – fully state funded and school directors are entirely responsible. The lack of a clear statement of objectives for the funding system leads to diluted responsibility for resource management, which ends up mostly in school directors' hands. Its implicit norm is that the national government will fully fund the current distribution of teachers across the school system. As a consequence, there is an emerging mismatch between responsibilities for management and responsibilities for funding.

A number of features of the funding approach facilitate the achievement of policy objectives

In general education, Estonia has a well-embedded system of funding school owners (state, municipalities and private entities) by a formula, which is largely driven by the number of students, but includes modifying weights to adjust budget revenues to differences in size and structural costs (i.e. level of education, programmatic hours). The formula also includes coefficients for students with special needs attending both special schools and mainstream schools. In addition, comprehensive funding for school textbooks, school lunches and professional development of teachers and school leaders are provided through separate earmarked grants, making it easy for the national government to ensure that they have been spent in accordance with their specified purposes. There is also extensive collection of data to support the formula calculations. The formula provides efficiency incentives as funding depends on the number of students, but this is partially offset by the compensation factor (smaller municipalities benefit from a higher coefficient as a smaller class size is assumed) which provides some protection for small schools and is thus sensitive to local needs. The formula funding system enables a high degree of financial autonomy for school owners. Also, the system appears to be highly equitable horizontally in the state sector as municipalities add very little to education budgets from their own resources while their per capita revenues are remarkably similar.

The system of financing for vocational schools is flexible and can be adjusted to the needs of the labour market. The adjustment takes place through the involvement of representatives of different economic sectors in the education planning process (state commissioned school places). Vocational schools can also generate a significant amount of freely disposable own revenues.

The vocational education sector has closer links to the labour market but it has low status and high drop-out rates

The Estonian government is adequately placing increasing emphasis on strengthening the mechanisms for the vocational education and training (VET) system to adjust to changing labour market needs. To a large extent this adjustment occurs via the close involvement of the representatives of different economic sectors both at the national level and the school level. There is also significant investment in the improvement of the labour market monitoring system that has the potential for making educational and financial planning for VET more evidence-based. The new qualification standards for vocational education are further improving the flexibility of the vocational school system, including through a better integration of general and vocational elements. However, vocational education has low status among students and parents, which might partly relate to the

strict separation between general and vocational education schools and the little effectiveness of career guidance in basic education. Another major challenge is the high rate of drop-outs in VET education (one out of every five students enrolled interrupts studies in a given academic year). A further limitation of VET in Estonia consists of the few opportunities students have to engage in work-based learning and apprenticeships. This relates to the fact that businesses have little involvement in the provision of vocational education and training.

Further efforts are needed to integrate students with special needs in mainstream schooling

Though Estonia has a well-developed network of special education schools (SEN schools) and programmes, relatively little progress has been made in integrating children with special educational needs into regular classes in mainstream schools. While the proportion of students with special needs studying in mainstream schools has increased in the last few years, most of these students still attend SEN schools. Moreover, few of those in mainstream schools who are capable of following the regular curriculum are doing so in integrated classes. It does seem that not enough resources are being devoted to integrating special needs students in mainstream schools, and that parents are choosing to keep children who might do well in mainstream schools in special schools because they are getting more teacher attention. There is a perception that mainstream schools lack the skilled personnel and assistant teachers necessary to make the integration a success. Teachers in mainstream schools also seem to have difficulties coping with the presence of SEN children in their classes, reflecting a lack of specific preparation. Whether this is because the funding that is provided to mainstream schools for special needs students is too low, or whether it is because there is a shortage of such specialists (or some combination of the two) is unclear. Furthermore, because funds for special needs students are not transferred to municipalities in the form of an earmarked grant it is difficult for schools, parents and the national government to monitor whether those funds are being transferred and used by schools for their assigned purposes.

Russian-speaking students do not receive enough support

The introduction of bilingual education in general upper secondary education and the ineffective teaching of Estonian in basic schools with Russian language of instruction may be increasing selection based on ethnicity. At the same time fully Russian language instruction programmes are still available in vocational upper secondary education. This is likely to contribute for a greater proportion of Russian-speaking students to attend vocational schools at the upper secondary level. The proportion of basic education graduates going into a vocational secondary school the year after graduation is noticeably higher for graduates from basic schools with Russian as the language of instruction than for graduates from basic schools with Estonian as the language of instruction. This difference has been increasing in the last few years following the introduction of regulations stipulating that Russian would progressively be discontinued as a language of instruction in general upper secondary education (and replaced by bilingual education). While Estonia has a few programmes designed to provide additional financial support to schools with Russian language of instruction, as well as additional Estonian language training to Russians-speaking students, these programmes are of limited scope. While the school funding formula provides for extra funding for Russian-speaking students,

potentially for extra teaching hours in Estonian language, the actual use of this extra funding is not audited. In addition, difficulties in mastering Estonian are imposing sometimes significant costs on (primarily) Russian-speaking households for private language instruction.

Local autonomy is well balanced with adequate horizontal accountability

Municipalities and individual schools carry a significant degree of autonomy – they can take a range of decisions at local and school level in order to deliver improvement. The overall operation of the intergovernmental finance system has provided municipalities with adequate, predictable, and equitable revenues, thus establishing a strong foundation for the decentralised governance of the country's schools. Even small, rural and/or economically disadvantaged municipalities have been able to modernise their schools, increase pre-primary enrolment and maintain easy physical access to schools with low student-teacher ratios. Also, Estonian school directors have a high degree of operational autonomy and control over school budgets including the ability to hire and dismiss teachers, set their salaries (above the national minimum), earn and retain own income (within the budget year), and pay for in-service teacher professional development (with a earmarked budget provided by the state), despite the fact that accounting functions are at the municipal level. This is an important strength and can help ensure that schooling contributes to the wider social and economic well-being of communities, families and individuals.

The move towards extended local and school autonomy has been paralleled with a high level of horizontal accountability ensuring the intensive involvement of parents, local communities and various other stakeholders through participatory boards of trustees in general education schools and advisory bodies in vocational schools. In addition, Estonia has a highly developed national education information system which allows the monitoring of many local and institutional level processes (such as student performance, funding and human resource management). The balance of power between the state, municipalities and schools is complemented by two interrelated mechanisms that strengthen the system of checks and balances: the relative strength of market mechanisms, on the one hand, and the actions leading to increased transparency, on the other.

Individual schools are key players in quality assurance but could benefit from greater externality

In Estonia, the quality assurance system is able to ensure a good balance between formative (developmental) and accountability purposes with a strong emphasis on schools' own quality self-improvement, whilst doing away with too much central government control and intervention. Schools are required to conduct self-evaluation at least once over a three-year period. This corresponds to the typical school development plan cycle and the school should evaluate its progress against this benchmark. This approach aims at engaging the school community – board of trustees, the teacher council, the student council, external experts – in school development and gives the main responsibility for quality assurance to the schools. Although school self-evaluation is mandatory the procedures for conducting and reporting the results of school self-evaluation are entirely at the discretion of the school. While the Ministry has developed tools for school self-evaluation, Estonian schools are under no obligation to use these. This limits the ability to compare schools' experiences and the consistency of practices across schools. In addition, the level of externality in quality assurance processes is low. There is little external

challenge to the conclusions of school self-evaluations; relatively little comparable quality information is provided to schools for self-evaluation; the external support provided to schools for self-evaluation has room to expand; and few municipalities operate a quality education framework.

Furthermore, while the role that is given to school "boards" to influence and actively shape the operation and organisation of schools is a strength in Estonia, this very much depends on the capacity of different boards to undertake this role. There is considerable variation in the approach to school planning and how involved the school community is in this. Finally, the school leader's role as the pedagogical leader can be further strengthened. Estonian school leaders, according to international surveys, seem to be relatively less engaged in activities related to school development, in observing instruction in the classroom and in preparing a professional development plan for the school.

There is a high degree of school choice but concerns about licensing processes to enter the school network

The provision of public funding to private schools has increased school choice, encouraged the growth of private involvement in the education system, and increased the diversity of institutions from which innovative pedagogical strategies can be drawn. Also, the requirement that municipalities whose students attend schools in other municipalities pay those municipalities the average per student non-salary operating costs of their schools has facilitated school choice and network rationalisation by ensuring that money follows students to where they attend school. However, new entry by private schools, encouraged by the funding system, has resulted in smaller schools and class sizes and hence a higher cost school system with no evident increase in student learning outcomes. Similarly to other systems that are based on per capita funding, especially those which allow private institutions to have access to public funding, the Estonian system faces the challenge of undertaking adequate selection of those services and providers that should be eligible to receive public funding. This requires a continuous monitoring of the existing school licensing processes assuming the selection function, and, on the basis of this, revising standards and the application of these standards when necessary. If this does not happen, funding claims by new services and providers may create unexpected burdens on the public purse. There is a need to increase the transparency of licensing decisions, particularly in terms of the assessment of need for the additional educational services.

EU funds create opportunities to improve the efficiency of the school system but there is scope to adjust their use

Estonia is using the EU structural and investment funds to modernise its education system. This is a major historical opportunity to achieve not only reforms improving the quality and relevance of education but also to realise the necessary structural adjustments to make the education system more efficient and financially more sustainable. The new strategic planning for the use of EU structural and investment funds for the period 2014-20 will be used as a powerful instrument to promote changes leading to higher efficiency and effectiveness in the Estonian school system. For instance, the new funds are being used to develop the new network of state-run general upper secondary schools and to assist municipalities to improve the quality of the provision at the basic education level as they consolidate their school network. However, analyses of the uses of EU funds provide indications that some adjustments can be made to the implementation of projects which

benefit from EU structural funding. Challenges include the monitoring of the implementation, the clarity of the rationale for the interventions, policy attention to the financial sustainability of the measures, transparent project selection criteria and the design of impact evaluations.

School leaders are recognised as a key resource but could be better supported

There is clear political recognition of the important role that school leaders play in Estonian schools. School leaders are recognised as a key resource and their professional development is considered crucial. Specific professional development programmes for established school leaders, newly appointed school leaders and future school leaders are being implemented in 2015. This reflects the high levels of autonomy provided to school leaders in delivering the curriculum and managing resources. The school leader is responsible for the overall quality of education services at the school, develops a school development plan and oversees its implementation. However, the position of "school leader" is perceived as unattractive and compensation is inadequate. The position of "school leader" is rather an extension of "teacher" and does not adequately enjoy a distinct professional status. There is currently not a distinct career structure for Estonian school leaders.

Also, no systematic mechanism to provide professional feedback to school leaders is available. There is no central framework for school leader appraisal and appraisal is not mandatory. The procedures for school leader appraisal are entirely at the discretion of the school owner. In the case that school owners do conduct regular school leader appraisal, there are likely to be very different criteria in use for the appraisal of school leaders and there is also little guarantee that these would be aligned to school self-evaluation criteria. Also, the capacity to conduct school leader appraisal varies enormously among different school owners. Some owners may have a specific department with responsibility for schools, but the number of employees will vary and may be only one. Overall, there did not appear to be a strong culture of professional feedback to the school leader on his/her performance and conduct. The frequency of professional feedback discussions between the school owner and school leader varied, as well as the nature of these discussions and whether or not these were linked to some form of professional reward or sanction.

Local autonomy for managing the teaching workforce is good and teacher resources seem to be equitably distributed

In Estonia, there is considerable autonomy for the management of the teaching workforce at the local level. Schools have considerable responsibility for recruiting and dismissing teachers as well as for setting teacher salaries (above the national minimum). This is a strength in a system where schools are individually judged on their ability to improve student learning. School leaders also have considerable room to develop the competencies of their teaching bodies in agreement with school development plans. Teacher appraisal processes internal to the school are established, include the observation of practices in the classroom and have an impact on the professional development of teachers. This strengthens the ability of school leaders to shape teacher professional competencies to properly respond to the needs of their educational communities. Also, the autonomy from which schools benefit to allocate their budgets to teacher resources (deciding on the number of teachers and the distribution of tasks across individual teachers) grants them with the ability to select the optimal number and mix of school staff for their schools. Finally, there are indications from international data that there is no inequitable distribution of teachers

across schools and school locations. The experience of teachers, their qualifications, student-teacher ratios and the intensity of teacher professional development do not seem to be unevenly distributed across school types and locations.

A new competency-based teacher career structure has been introduced but its potential is not being adequately used

A career structure based on the acquisition of competencies both for general education teachers (four levels) and for vocational education teachers (three levels) has been introduced. This is a positive move to get away from the previous complex and resource intensive system of teacher attestation. The new certification model has a range of advantages. First, teacher certification to reach the different career stages is a competency-based process, i.e. it directly assesses whether a teacher has acquired the competencies needed to perform at the different stages of the career, using as a reference teacher professional standards. Second, the new teacher certification model has better links to teaching practice, in particular through the analysis of the teacher portfolio and, in some cases, through classroom observation. Previously, the teacher attestation model was too resource intensive and resembled an academic exercise not concentrated on the core work of teachers. Third, the new certification system is owned by the profession through the leadership of the Estonian Association of Teachers, which is the awarding body. In the new model, teachers, as they access higher stages of the career structure, are expected to have deeper levels of knowledge, demonstrate more sophisticated and effective teaching, take on responsibility for curricular and assessment aspects of the school, assist colleagues and so on. Given the potential greater variety of roles in schools as the teacher goes up the career ladder, the career structure has the potential to generate greater career diversification.

However, the potential of the existing competency-based career structure, for both general and vocational education teachers, is not being adequately used. At this stage it essentially remains a voluntary instrument to formally recognise teacher competencies and with no direct association with compensation and the specific roles performed at the school. Teachers do not seem well-informed about both the teacher professional standards and the teacher qualification stages to which they could access through a certification process. Those who know about these new processes show little interest in engaging in them as they lack incentives to do so. At the same time, school directors seem to take little account of the qualification stages in the context of salary setting at the school level. Generally, schools in Estonia do not seem to be using the competency-based career structure as a reference to distribute roles and tasks among teachers within schools. Hence, the career structure is yet to penetrate schools' teacher management practices.

Teacher professional development is well established but its operation raises a range of concerns

Professional development is well established among Estonian teachers and benefits from a wide supply of programmes offered by a variety of providers. Schools have dedicated budgets for professional development and the market for the provision of professional development seems to be responding to schools' demands. Another positive feature is that, with the development of the new career structure, professional development is conceived as a means to acquire the new competencies necessary for professional growth and career advancement. However, there are some concerns about the operation of teacher professional development. First, the use of results from school-based teacher appraisal to inform the

teacher's professional development plan seems limited. Second, even if schools organise internal processes for teacher appraisal, there seems to be limited alignment to school development plans. Third, the unaffordability of courses, conflicts with the work schedule and lack of relevance of teacher professional development activities seem to be important barriers for some Estonian teachers to engage in professional development. Fourth, even though professional development is provided in an open market with a diversity of providers, there is no process to accredit professional development programmes.

The criteria used to establish actual teacher compensation lack transparency

In Estonia, career advancement and actual teacher salaries are typically defined at the school level by the school director even if, in some municipalities, school directors may need to follow a municipal framework for teacher compensation, especially if it is set by a collective agreement with teacher unions. There are some potential benefits of managing the teaching workforce mostly at the school level. It can allow school directors to do proper staff planning and reward, retain and motivate teachers, in the specific context of the school. However, there are concerns about the transparency and subjectivity of the criteria used to determine actual individual teacher salaries (or the amount the school may pay above the minimum teacher salary) and of the school-level (or municipal-level) rules for career advancement and recognition of teacher professional growth. Many teachers perceive that rules for salary growth and potential salary rewards are not transparent. A major reason for the lack of transparency in defining teachers' salaries is the absence of national regulations about a teacher career structure and ways to link teacher compensation to career advancement and responsibilities at the school. At the same time, in order to appraise teacher performance, schools generally do not use a common set of reference standards. For this reason, in fact, school directors may feel inhibited to establish a closer linkage between pay and performance and increase teacher compensation more as a result of the extra responsibilities and tasks teachers assume in the school.

Policy recommendations

Further consolidate the school network through co-ordination of education provision

Given the present considerable inefficiencies in the provision of education services (e.g. small schools and classes) and the ongoing demographic changes, the rationalisation of the school network is a clear policy priority. Developing planning capacity, co-ordination mechanisms and inter-municipal collaboration is cornerstone to create a more efficient and equitable school network. School consolidation should be about making optimal choices to ensure quality education for all children. The objective should be to ensure that students' access to high quality education is not affected adversely by where they live. It is therefore important that the focus is not on savings or a prioritisation of accessibility over quality. The key question in considering school consolidation must therefore be what is in the best interest of students.

In the consolidation of the school network, in particular in small municipalities, Estonia can consider a number of different strategies. One possibility it to close or consolidate small schools, or reduce services within schools (e.g. a school providing only Years 1-4) with due consideration to the costs, feasibility and acceptability of different alternatives such as transporting students and housing them at boarding schools. Another possibility is that nearby schools share resources. Shared resources may include teachers (who would conduct lessons and other activities in more than one school), sport facilities

(open to students from all schools participating in the collaboration), computer labs and similar. A further possibility is the clustering of schools, which involves the conversion of several nearby small schools into satellites of one educational institution with a single leadership team and budget.

The particular specificities of each county or region imply that the strategic reflection on effective school network co-ordination and planning should have a strong county or inter-municipal dimension with the general goal of "regionalising" school network design and planning. This could be organised through regional planning platforms covering all levels of school education and involving all relevant stakeholders (e.g. municipalities, private providers, regional representatives of the world of work, representatives of national authorities and county governments) and connected to regional development processes. The regional planning processes should also encourage more horizontal co-operation between municipalities, especially in the case of those of smaller size. Such co-operation is not facilitated due to the lack of efficient organisational and financial models, the weak county level co-ordination and the strong role of school directors, making co-operation for jointly provided educational or connected services very rare. This co-operation could involve the co-management of basic schools across municipalities, improving transportation services and the common use of various facilities, joint purchasing, shared school maintenance, improving the access to professional services, etc.

Clarify responsibilities in the education sector and further consolidate upper secondary education

There is a need to clarify responsibilities in the education sector. The government's medium-term intention of establishing a division of labour, within public education, whereby municipalities provide pre-primary, primary and lower secondary education and the state takes responsibility for upper secondary education (both general and VET) and special education schools seems a good step in that direction. This will reduce unnecessary duplication; provide the potential for better co-ordination within education levels (or school types); establish closer linkages between funding, school management and accountability; facilitate the alignment between education strategic objectives and school-level management; reduce ambiguities in defining who is responsible for what; and assist with school network planning.

In this context, the national government's policy of not allowing municipalities to create new schools that combine the teaching of primary and lower secondary education with Years 10-12 is to be supported. However, the implementation of the "recentralisation" of general upper secondary education is faced with a number of challenges and needs to proceed with considerable caution. The following strategy is suggested: i) municipalities should be required to create separate upper secondary schools of reasonable scale by a certain date or close down whatever upper secondary classes they may have; ii) municipalities which demonstrate the ability to run upper secondary education within operation parameters defined by the state (e.g. in terms of scale, quality and diversity of offerings) and which express an interest in keeping the management of upper secondary education could be allowed to do so under formal agreements signed with the state; and iii) state-run *gymnasiums*, as currently planned, could then be targeted to meet the demand for general upper secondary education in those geographical areas where the corresponding municipalities are not able to offer such service according to the parameters established by the state.

Create stronger financial incentives for school and class consolidation

An option to be considered in order to consolidate the school network is the specification of a threshold class size or average school class size below which students would not be funded from the state grant, unless the school is identified as meriting "protection" in order to maintain student access in remoter areas. This would promote class consolidation if the minimum class size specified is sufficiently high. The government could define an average minimum class size below which a school is not funded from the state budget if the school's average class size remains consistently below the threshold size for a given number of years (e.g. three years). Average class size would be measured as the average number of students per year level. Different class size thresholds should be defined for different education levels and rural locations. Primary education classes, in particular in Years 1 to 6, need to be smaller in rural areas than classes for secondary aged students, who are capable of travelling longer distances to school. Hence, regulations about the average minimum class size could take into account the extent to which early learning is to be provided locally. Within the extent of the state funding resulting from the regulated average minimum class size, school owners and schools would retain their autonomy on class organisation, including in deciding the actual size of specific classes within schools. This could possibly be assisted with extra resources coming from the school owner's own revenues. In particular, if municipalities want to maintain schools with average class sizes below the regulated average minimum class size, they would pay for the additional costs out of their general budgets.

As an alternative to introducing a minimum class size threshold, further measures could be taken to put financial pressure on school owners with small schools and classes such as by modifying the existing compensation mechanism used to give more funding per student to small municipalities. This would involve increasing, for the smaller municipalities, the normative class sizes used to determine the number of teaching positions that municipalities with different student populations are entitled to. An additional measure is to define the minimum number of students required before a school is approved for inclusion in the network, for instance with an average class size of 20 for Years 1-9 and of 25 for Years 10-12. Maintaining a sufficiently high class size threshold before schools are included in the network would go some way to address the problem that new entry from the private sector, stimulated by receiving the same per student formula allocation as public schools, has resulted in reducing average school size and thus the efficiency of the school system.

Finally, the government should also consider using earmarked grants to provide municipalities with additional funding for: mainstreaming students with special educational needs; providing additional Estonian language instruction for Russian-speaking students; providing targeted support to families unable to meet the co-financing requirements of municipal pre-primary schools; and subsidising school transport and the maintenance of dormitories.

Rethink the organisation of school staff and make the teaching profession more selective

A clear priority, as part of the school consolidation process, is re-thinking the organisation of school staff. First, school rationalisation is likely to require a certain degree of teacher redundancy. This entails developing strategies for reallocating, redeploying and retiring teachers currently employed in schools who will be affected by school (or class)

consolidation. In part, teacher redundancy will be made easier by the high proportion of teachers who are close to retirement age. It will be important to ensure teachers who reach retirement age actually retire. Also, for teachers moving to sectors outside education, it would be important to provide them with adequate advanced notice for them to prepare their professional conversion. This could go alongside some financial support for specific training which could facilitate their transition to other sectors of activity. Also, for some teachers, there are a number of areas in which teachers made redundant by school consolidation could assume new responsibilities in schools in view of strengthening schools' ability to respond to a greater variety of needs. These include engaging them to help integrate special needs students in mainstream schools and classes; using them to implement strategies to individually support students with learning difficulties; and involving them in advisory roles within or across schools.

Second, in spite of the fact that there is an overall oversupply of teachers in the Estonian school system, it is important for the school system to ensure a given rate of teacher renewal so the school system is continuously provided with new ideas and perspectives. It is important that newly educated teachers are not lost for the profession. But, clearly, Estonia has the opportunity to be more selective about those who are employed and those who enter the profession and initial teacher education. Given that not a lot of new teaching posts are likely to be available in the coming years, it is clear that entry into preparation programmes can be much more selective to ensure only high-quality graduates fill the available teaching posts. This could go alongside initiatives at the starting point of the teacher's career strengthening requirements to enter the profession, in addition to better incentives for beginning teachers, to ensure high-quality graduates actually enter the teaching profession.

Third, a priority is also to improve the working conditions in Estonian schools. There is room to improve the salaries of pre-primary education teachers to bring them closer to the salaries of other teachers. At the same time, greater efforts are needed to better resource individual schools so they are able to provide better instructional materials to teachers, more relevant professional development for teachers, and better conditions for individual student support. The latter may include the expansion of learning support staff in schools which should be part of an overall agenda to improve the ability of schools to provide individual support for students with special needs and learning difficulties.

Make vocational education a more attractive option and improve its efficiency

Improving the attractiveness and efficiency of vocational secondary education involves making programmes more relevant for the labour market and for regional development, further involving employers and improving student completion rates. A holistic strategy could combine: a funding approach that gives institutions more stability and better incentives to improve completion rates; improved career guidance for students; more committed engagement from employers; and ensuring regional development strategies are taken into account.

In order to strengthen the stability and predictability of the funding of vocational education and training it is recommended to introduce national level mid-term planning for professional profiles and the associated financing with a definition of publicly-funded student places, per occupation and VET school, for three-year periods instead of the current annual decisions by the State Commission for Vocational Education. A priority to address the dropout rate challenge in vocational education in Estonia should be the

improvement of career guidance services both prior to enrolment in vocational education and during vocational studies. However, reducing the dropout rate may require a more complex set of policy instruments at upper secondary level. For example, creating an early warning system that effectively helps the identification of students at risk of dropping out, as well as building the necessary prevention capacities of teachers and institutional capacities of VET schools are important instruments. One of the possible incentives for improving completion rates in vocational schools is already being considered by Estonian authorities: adding a performance-based component to the funding of individual vocational schools. However, introducing a performance-related component to funding needs to be done with caution to avoid undesired effects. Introducing such component in a small scale (e.g. 2-5% of funding) is probably sufficient to provide the desired incentives for institutions to improve student completion rates. Also, the national government should adjust the funding to individual VET schools to ensure per student funding is based on the actual number of enrolled students, i.e. funding levels based on attributed commissioned places should be adjusted during the school year to take into account places which remained vacant and students who dropped out.

Exploring various ways and incentives to increase the contribution of companies to the costs of vocational education and training is also recommended. One option is to establish a vocational education and training fund to which those enterprises, which do not invest in training directly, contribute. Also, the introduction of tax allowances could encourage increased employers' contributions. An additional possibility is to expand the opportunities for dual training in which companies contribute to the costs of apprenticeships by paying apprentice salaries. These strategies seek to provide more work-based learning and apprenticeships within the VET system. The challenge to promote work-based learning is to find a balance among the productive work in work-based learning, the salary paid to the trainee and the level of subsidies.

Expand inclusive education for students with special educational needs and adjust the functions of special schools

The movement towards the integration of students with special educational needs (SEN) into regular classes in mainstream schools has been very slow. This runs against Estonia's commitment to inclusive education. The solution lies, in part, in increasing the financial support given to mainstream schools for SEN students. In this way, the national government should review the coefficients used to provide additional revenue to mainstream schools for teaching SEN students in both mainstream and special classes. These coefficients should make it possible for schools to hire well qualified teaching assistants to work in integrated classes. It is also important that funding for SEN students in mainstream schools is earmarked and that there are effective ways to monitor its use to facilitate the integration of SEN students in regular classes. The expansion of effective inclusive education will also require SEN schools to enlarge their functions to support both students with special needs being educated inclusively in mainstream schools and teachers providing inclusive education in these schools. The other key component of a strategy for inclusive education is enabling mainstream schools to provide effective inclusive education. This can be a slow and gradual process which, however, can be significantly accelerated by massive and effective capacity building. The practice of inclusive education requires major changes both in the professional competences and the attitudes of mainstream teachers. Only teachers capable to use a rich repertoire of

innovative teaching methods and capable to create learning environments that support personalised teaching and learning can achieve successful inclusive education. It is important that all teachers receive some preparation to manage classes with SEN students, either through initial teacher education or professional development programmes.

Further support Russian-speaking students in Estonian language

The national government should consider developing an earmarked grant designed to provide financial support to municipalities and schools for the additional hours of Estonian language instruction necessary to make Russian-speaking students proficient in the country's official language. Language acquisition problems clearly pose barriers to, and raise the costs of Russian-speaking students advancing through Estonia's education system. As such, they run against Estonia's commitment to equal opportunity and fair treatment. Language barriers are likely to distort the choice of upper secondary programmes by Russian-speaking students in favour of vocational programmes, and thus ameliorating the basis for this choice would probably improve the efficiency of the system as well.

Invest in pre-primary education

The current financing of pre-primary provision requires reform. While coverage rates for children aged 3-5 have reached good levels, public spending on pre-primary education relative to GDP per capita remains very low by OECD standards. This is reflected in very low salaries for pre-primary education teachers, possibly resulting in lower quality of pre-primary services. The low level of public funding in pre-primary education is partly explained by the fact that it is provided by municipalities which often have very limited own resources. Since pre-primary education is so important in preparing a child for a successful school career, it is recommended that, as additional public resources become available for education (e.g. as a result of school consolidation), the Ministry of Education and Research progressively assumes responsibility for the full public funding of pre-primary education, transferring public funds for pre-primary education to municipalities as it does for primary and secondary education (e.g. through the education grant).

Strengthen the degree of external challenge to further improve school self-evaluation practices

There is a need to ensure an adequate degree of external scrutiny to challenge the findings of school self-evaluation. A possible approach is to give consideration to extending the existing thematic external school evaluation approach to conduct individual whole-school evaluations where data indicate there may be particular quality concerns. In schools where risks have been identified, there could be a thorough examination of the school self-evaluation results and procedures and targeted support from advisors where necessary. There is varied capacity for school self-evaluation across schools. In recognition of this, many education systems with external whole-school evaluation adapt their evaluation cycles or intensity of evaluation according to the school's capacity to conduct rigorous self-evaluation. Those schools where self-evaluation procedures are less robust are subject to a more frequent or more intense external school evaluation. Another possibility is to externally validate school self-evaluation processes through an audit system led, for instance, by inspection services. Also, as a complementary approach, there could be stronger emphasis on the publication and use of results from self-evaluation. This

is an area where there could be clearer procedures and requirements for either the board of trustees or the advisory body to publicly comment on the results of school self-evaluation and to underline areas for future development.

Make the school leader position more attractive and provide further professional support to school leaders

Estonia is faced with the challenge of attracting new talent to prepare for and eventually take up school leader positions. There is a clear need to make the school leadership position more attractive and this requires re-thinking of the school leader career and finding ways to make leadership positions more financially attractive. Steps in making the profession more attractive may include: a distinct career structure for school leadership (linking career progression to specific leadership responsibilities as underpinned in school leader professional standards); an independent salary scale for school leadership; and appraisal results to inform career advancement. Also, there is a pressing need to develop and ensure implementation of a regular and more coherent approach to school leader appraisal. The use of a central reference on which to base school leader appraisal is highly desirable in increasing the objectivity of appraisal procedures. Earlier efforts to develop professional standards for school leaders in Estonia can provide input for the plans to develop an "authoritative" set of professional standards. The challenge is to develop appraisal processes, frameworks and conditions that do not require an excessive investment of time and effort, that serve as an effective tool for improving practices and that are perceived as useful and relevant by school leaders.

Make teacher certification a requirement for teachers and compel school owners to adopt certification levels

It would be beneficial to make external periodic teacher certification a requirement for teachers using the existing competency-based career structure. Teacher certification, to access the different stages of the career, would have as its main purposes providing public assurance with regard to teachers' standards of practice, determining advancement in the career, and informing the professional development plan of the teacher. This approach would convey the message that reaching high standards of performance is the main road to career advancement in the profession. At the same time, a teacher certification system should provide incentives for teachers to update their knowledge and skills and reward teachers for their performance and experience. The idea is that, in the medium-term, the certification process (alongside the competency-based career structure) is integrated, in ways to be defined by individual schools, in school-based approaches to human resource management. This would involve requiring schools and/or municipalities to design salary scales which recognise the competency-based career structure defined nationally. Within this regulation, schools and municipalities would still have enough freedom to associate pay levels with other aspects of a teacher's work such as the roles and responsibilities performed at the school, years of experience or performance as appraised at the school level.

Strengthen school-based teacher appraisal as the main process for teacher development

The tradition of school-based teacher appraisal is a key strength of the Estonian approach to the management of the teaching workforce. The current system for internal appraisal is based on a non-threatening evaluation context, a focus on classroom observation, supportive school leadership and a culture of feedback. This emphasis on

teacher appraisal which is predominantly for teacher development should be maintained and strengthened through ensuring: i) the teacher professional standards are used; ii) teacher appraisal results shape individual teachers' professional development plan; iii) teacher professional development links to school development; and iv) school leaders strengthen their instructional leadership skills. In order to guarantee the systematic and coherent application of school-based teacher appraisal across Estonian schools, it would be important to undertake the external validation of the respective school processes. An option is for inspection processes conducted at the county level to include the audit of the processes in place to organise teacher appraisal, holding the school director accountable as necessary.

Ensure the relevance of professional development for teachers and accredit programmes

Estonian teachers express some concerns about the unaffordability of professional development courses as well as their lack of relevance. This might result from the fact that those programmes they consider more relevant are not offered free of charge. At the same time the lack of relevance might result from a lack of information of providers about professional development needs of teachers as identified at the school level. In part, this might be explained by the limited connection between school-based teacher appraisal, professional development of individual teachers and school development strategies. As suggested above, these connections need reinforcement. At the same time, suppliers of professional development programmes need to better connect to the professional development needs identified by individual schools. In this context, it is particularly important to introduce a process for accrediting individual professional development programmes. The accreditation would ensure the quality of programmes and give special attention to their relevance to Estonian teachers. It should engage in an assessment of the impact of individual programmes and take into account the level of satisfaction of teachers.

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Chapter 1

School education in Estonia

School governance in Estonia is fairly decentralised and involves two levels of administration: the state and municipalities. While the government and the Ministry of Education and Research are responsible for national education policy and the overall strategy for the education system, three types of providers offer competing education services: the state (dominant in vocational education), the municipalities (dominant in pre-primary and general education) and private. The large majority of children attend public schools, although private providers receive public funding on a similar basis than public schools. The Estonian school system is high-performing. Coverage rates in pre-primary education are high, participation in schooling is almost universal, the performance of students at the secondary level is among the best in Europe and adults have literacy and numeracy skills above the OECD average. In addition, at the secondary level, students' socio-economic background has a smaller impact on performance in Estonia than in other OECD countries. However, there are concerns about the performance of students in Russian language schools.

This chapter provides the key contextual aspects – political, demographic and economic – for the subsequent analysis. It includes a detailed description of the organisation of school education in Estonia, including of its governance arrangements. In addition, it provides an account of the main trends and concerns within the Estonian education system.

Context

Geography

Located by the Baltic Sea, Estonia has a territory of 45 227 km^2 and a population of 1.3 million. It is bordered to the north by the Gulf of Finland, to the west by the Baltic Sea, to the south by Latvia, and to the east by Lake Peipus and Russia. Across the Baltic Sea lies Sweden in the west and Finland in the north. Estonia's capital and largest city is Tallinn.

Estonia is a developed country with an advanced, high-income economy. It ranks very high in the Human Development Index (UNDP, 2014). In the OECD context, according to OECD wellbeing indicators, Estonia performs favourably in measurements of education, environment, work-life balance and gender equality but lags behind with respect to subjective life satisfaction as well as household disposable income and health indicators (OECD, 2015).

Governance and administration

Administrative units

Estonia restored its independence in 1991 and is a sovereign democratic republic wherein the supreme power of the State is vested in the people. Estonian political system is primarily comprised of the following institutions: i) the people; ii) the Riigikogu (parliament); iii) the president; and iv) the government. The territory of Estonia is divided into counties (*Maakonnad*). Each county is further divided into municipalities (*omavalitsus*), which is the smallest administrative subdivision of Estonia. There are two types of municipalities: an urban municipality – *linn* (town), and a rural municipality – *vald* (parish). There are 15 counties (see Table 1.1) and, as of 2015, 213 local government units in Estonia: 30 towns and 183 rural municipalities (Ministry of Education and Research, 2015).

The county government (*Maavalitsus*) is led by a county governor (*Maavanem*), who represents the national government at the regional level. Governors are appointed by the government of Estonia for a term of five years.

All issues concerning local life are decided and managed by local municipalities. Each municipality is a unit of self-government with its representative and executive bodies. Municipalities are represented by a council (*volikogu*) that is elected for four years in local elections. The council has the right to make decisions within local government's areas of competence. Local government has an independent budget and the right to levy and collect taxes (see Chapter 3 for further details). Local government has the right to establish alliances and joint agencies with other local governments. Such co-operation contributes

Table 1.1. **Counties of Estonia**

Counties	Capital	Area (km^2)	Population (2015)
Harju County	Tallinn	4 333	572 103
Hiiu County	Kärdla	989	8 589
Ida-Viru County	Jõhvi	3 364	149 483
Järva County	Paide	2 623	30 425
Jõgeva County	Jõgeva	2 604	31 145
Lääne County	Haapsalu	2 383	24 323
Lääne-Viru County	Rakvere	3 627	59 583
Pärnu County	Pärnu	4 807	82 829
Põlva County	Põlva	2 165	27 641
Rapla County	Rapla	2 980	34 676
Saare County	Kuressaare	2 673	31 756
Tartu County	Tartu	2 993	152 188
Valga County	Valga	2 044	30 176
Viljandi County	Viljandi	3 422	47 476
Võru County	Võru	2 305	33 426

Source: Statistics Estonia (2015), Statistics Estonia Homepage, *www.stat.ee/en*.

to the development of rural municipalities and towns and enables a more effective representation and protection of joint interests at different levels of public authority (Ministry of Education and Research, 2015). A municipality may contain one or more sub-units. For instance, Tallinn is divided into eight districts (*linnaosa*) with limited self-government. Municipalities range in size: from Tallinn with over 400 000 inhabitants to Ruhnu with as few as 60 inhabitants. Over two-thirds of the municipalities have a population of under 3 000. The second and third largest cities are Tartu (about 100 000 inhabitants) and Narva (about 60 000 inhabitants).

National goals and priorities

The government of Estonia has adopted the National Reform Programme "Estonia 2020", which establishes national goals in the context of the Europe 2020 strategy. Its main aim is to ensure the sustained socio-economic development of country up to 2020. The two central objectives are increasing productivity and employment in Estonia, which gives education and employment policies high priority. The Estonia 2020 Action Plan 2014-18 serves as an important basis for targeting national investments as well as European Union structural and investment funds. "Estonia 2020" comprises 17 objectives divided into four fields (Government of Estonia, 2014):

- ***Educated population and cohesive society:*** the quality and availability of education and labour force supply, lifelong learning strategy.
- ***Competitive business environment:*** policy that supports the improvement of the long-term competitiveness of businesses, creative industry, international competitiveness of research and development and business-supporting infrastructure.
- ***Environmentally friendly economy and energy:*** energy savings and resource savings.
- ***Sustainable and adaptive state:*** sustainability of public finances, ability to react to changing circumstances and imbalances, tax policy supporting the development of the economy and modernisation of the government sector.

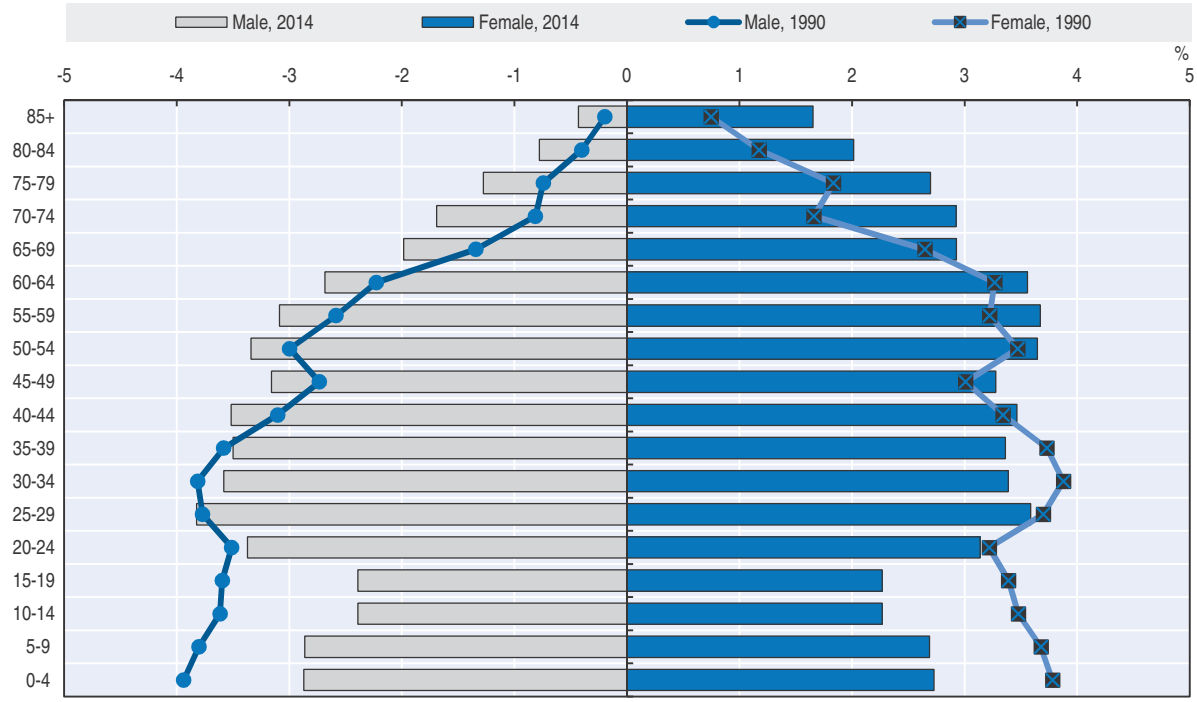
Demographic characteristics

Population

The population density is low (30 inhabitants/km^2), differing greatly between counties (132 inhabitants/km^2 in Harju compared to 8.4 inhabitants/km^2 in Hiiu). The existence of 1 521 islands adds to this complexity, only 19 of which are inhabited, Saaremaa being the most populous with 29 753 inhabitants. Approximately 25 000 km^2 or 55% of Estonia's 45 227 km^2 are uninhabited. A tenth of the territory is sparsely populated with only 1-2 inhabitants/km^2. According to the 2011 census, the most densely populated area is the Linnamäe-Kärber area in the Lasnamäe district of Tallinn with 15 800 inhabitants/km^2 (Statistics Estonia, 2015).

The Estonian population pyramid (Figure 1.1) shows the effects of two phenomena: a population decrease and the ageing of the population. After the end of World War II the population of Estonia started to increase and reached its peak in 1990, with 1.6 million people (Statistics Estonia, 2015). Following independence in 1991, a significant proportion of the people originally from other Soviet Republics left the country and, in 1992, over 43 000 people emigrated from Estonia. Emigration increased significantly again after Estonia's accession to the European Union in 2004, mostly to Finland, resulting in an important loss of young females (in 2013, there were 311 792 women under age 40 compared to 329 619 men) who, contrasting with men's patterns, tend often not to return to the country. Yet, there are more women (704 007, in 2013) than men (616 167) in Estonia, mainly due to the fact that the proportion of women at age 65 and above is significantly higher. All in all, the size of the population has decreased significantly in 20 years (12.6%), and will probably keep dropping.

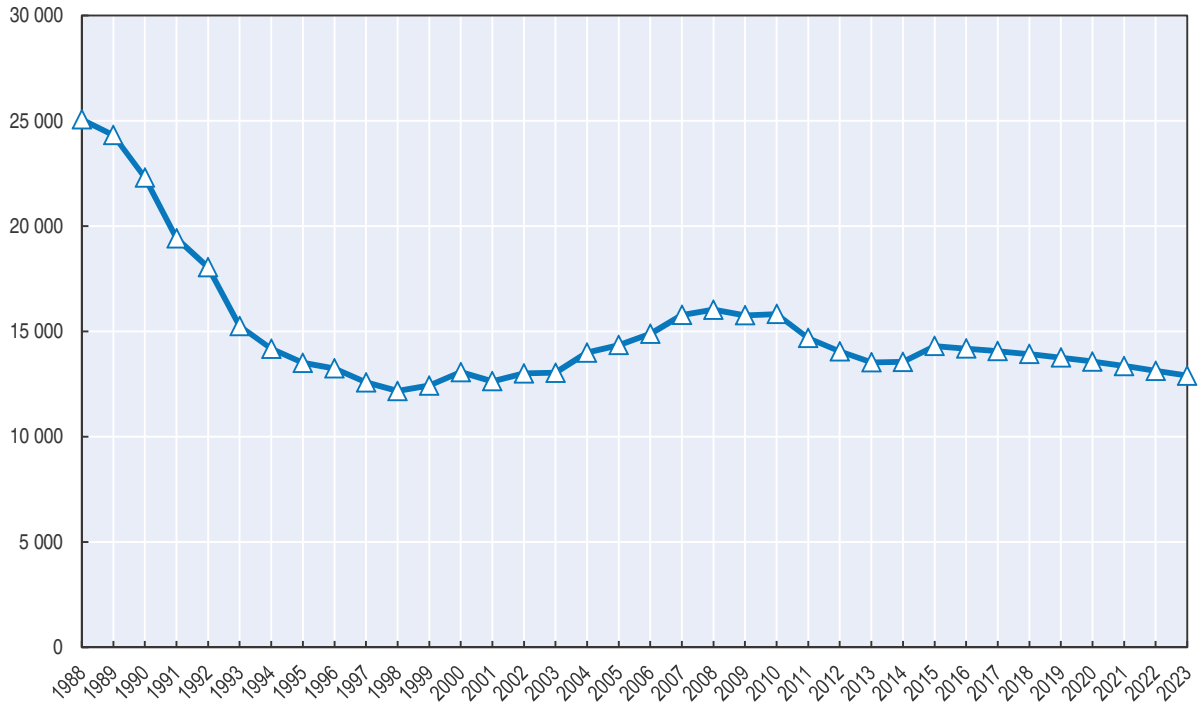
Figure 1.1. **Estonian population pyramid in 1990 and 2014**



Source: Statistics Estonia (2015), Statistics Estonia Homepage, *www.stat.ee/en*.

Furthermore, the Estonian population has been increasingly ageing, partly due to the decline in the number of women in fertile age and the birth rate reduction. The latter is particularly notable in comparison to the end of the 1980s (see Figure 1.2). It is likely that the birth rate will keep dropping, in part because the number of women in fertile age is declining annually and also because the current emigration trends indicate that young women in birth-giving age keep leaving Estonia.

Figure 1.2. **Number of births from 1988 to 2013 and forecast to 2023**



Note: Data from 1988 to 2014 refer to actual births while data from 2015 consist of estimates.
Source: Reproduced from Ministry of Education and Research (2015a), *OECD Review of Policies to Improve the Effectiveness of Resource Use in Schools: Country Background Report for Estonia*, *www.oecd.org/education/schoolresourcesreview.htm*.

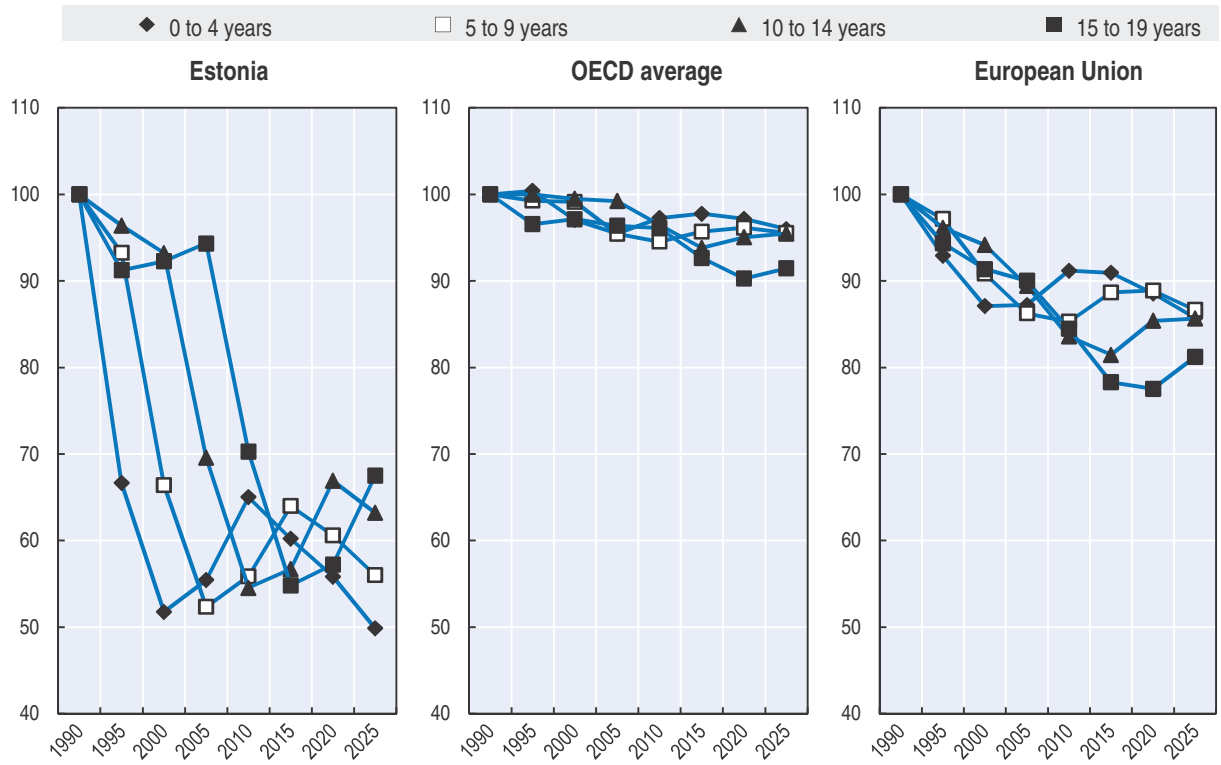
Population ageing, emigration and the notable cutback in the birth rate deeply affect education. Figure 1.3 shows the dramatic decline in the school-age population since 1990, which has been far more pronounced than in the EU or in the OECD area. In the short-term, the demand for pre-school child care services has increased, but in the long run the number of students in the school system will keep dropping and the need for adult education and training will keep growing (Ministry of Education and Research, 2015).

Cultural and language diversity

Estonian is the official language of the country, though there is considerable cultural and language diversity among the population. Ethnic Estonians are the main group, making up 69.7% of the population, according to the 2011 census (67.9% in 2000 census, 61.5% in 1989 census). In 2012, the share of Estonians among births was 72.4%. Russians are the second largest ethnic group, and represent 25.2% of the population while other groups include Ukrainians (1.7%), Belarusians (1%) and Finns (0.6%). Other minority ethnic

Figure 1.3. **Variation in school age population in Estonia compared to the OECD and the EU**

1990 = 100



Source: OECD (no date), *Historical population data and projections (1950-2050)* statistical database, *http://stats.oecd.org/*.

groups account for 1.6% of the population (whereas 0.1% of the population could not define their ethnic nationality in the 2011 census). Among people aged 40 or less the share of Estonians increases to 73.3% and the share of Russians and other ethnicities drops. The share of ethnic groups other than the main ethnic group is the highest among people aged 50 and above – a phenomenon attributable to the Soviet era when Estonia was a destination country for the other Soviet Republics (Ministry of Education and Research, 2015). Immigration figures are low: an average of 3 482 immigrants per year during 2011-13 while, on average, 6 425 people left Estonia during the same period. Most migrants originated from the EU member states whereas a considerable share of migrants still arrived from Russia and Ukraine.

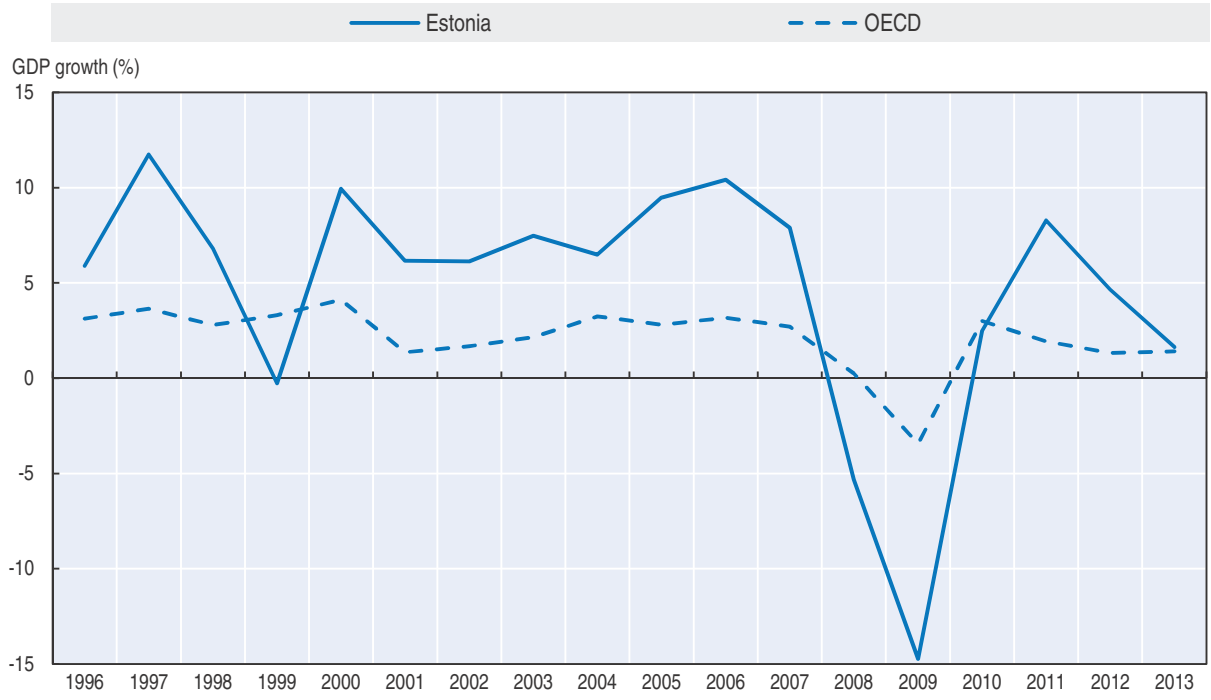
According to the 2011 census, 85.2% of inhabitants have Estonian citizenship and 7% Russian citizenship. Estonian citizenship is: i) acquired at birth if at least one parent has Estonian citizenship; ii) obtained through naturalisation; and iii) restored to a person who had lost Estonian citizenship as a minor. Estonian citizens may not simultaneously be citizens of another country. 6.6% of the population has no determined citizenship. A person with undetermined citizenship is a person who has lost an earlier citizenship due to the cessation of his or her country of citizenship (e.g. citizens of the former Soviet Union and Yugoslavia) and has not realised his or her opportunity to become a citizen of a successor state (Ministry of Education and Research, 2015).

Economy

Economic growth

Estonia has experienced a considerable economic growth in the last 15 years (see Figure 1.4). Between 2000 and 2008, the Estonian economy grew, on average, 7% per year, being one of the three countries in the EU with the fastest GDP growth, and increased its GDP per capita from 45% of the EU27 average to 67% during this period (Estonia.eu, 2015). The situation drastically changed with the financial crisis, and the Estonia's economy experienced a 14% drop between 2008 and 2009, compared to an OECD drop of 3%, ranking first among the OECD countries for GDP decrease. Economic growth turned positive in 2010, and the GDP grew by 8% in 2011, 4.6% in 2012 and 1.6% in 2013 against an average OECD GDP growth of 1.9%, 1.3% and 1.4% respectively (OECD, 2014a).

Figure 1.4. **Evolution of GDP growth in Estonia and the OECD, 1996-2013**



Source: OECD (2014a), *OECD Economic Outlook*, *http://dx.doi.org/10.1787/eco_outlook-v2014-2-en*.

In 2013, the GDP of Estonia at current prices was EUR 18.7 billion, of which the share of Harju county was EUR 11.5 billion and that of Tallinn EUR 9.3 billion, followed by Tartu and Ida-Viru counties, with a share of GDP of 10% and 7.6% respectively. In 2013, 67% of the total value added of Estonia was created in services, 29% in industry and construction and 4% in agriculture, forestry and fishing. The service sector was the biggest sector in all counties except for Ida-Viru. The share of services was the largest in Harju (75%) and Tartu (69%) counties, mainly due to the high input of the cities of Tallinn and Tartu. Agriculture, forestry and fishing share was the highest in Jõgeva County (22%). Finally, the share of industry and construction was the largest in Ida-Viru County (53%), which shows the important role of mining and energy in this county's economic activity. The GDP per capita was EUR 14 218 in 2013, an EUR 884 increase compared to 2012, Harju being the county with the highest GDP per capita, exceeding Estonia's average by 42%. Harju was followed by

Tartu and Lääne-Viru Counties, where the GDP per capita was 86% and 73% of the Estonian average respectively. The indicator was the lowest in Põlva County, where the GDP per capita was less than half of the Estonian average (Statistics Estonia, 2015).

Unemployment

Labour market conditions in Estonia vary depending on educational attainment. Between 2010 and 2012, unemployment rates for 25-64 year-olds who had not attained an upper secondary education fell by 5.6 percentage points to 22%, while the EU21 (EU member states which are also members of the OECD) average kept increasing to reach 17%. Moreover, unemployment rates for 25-64 year-olds with a higher education degree decreased by three percentage points between 2010 and 2012 from 9.1% to 6.1%, while the EU21 average kept increasing to reach 5.7% (OECD, 2014b). The unemployment rate is significantly higher among young people, though it has decreased in the last four years, from a peak of 32.9% of unemployment in 2010 to 18.7% in 2013. Furthermore, 12.5% of 15-24 year-olds were not in education, employment or training (NEETs) in 2012 (OECD, 2014b; Ministry of Education and Research, 2015). Finally, while labour market statistics by language background are not available, the unemployment rate of ethnic non-Estonians (whose large majority are ethnic Russians) was 12.4% whereas for Estonians it was 6.8% in 2013, despite broadly similar educational attainment levels (OECD, 2015).

State budget

In 2013, the state budget amounted to EUR 7.74 billion. In this year, the main sources of income for the state budget were receipts from various taxes, with the largest revenue coming from the social tax (27.6% of budget revenues), followed by value added tax (20%) and excise duties (10%). Grants accounted for the largest proportion of expenditure (52%), followed by operating expenses (28%) and expenditure on labour costs and administration (10%). In general, Estonian governments have been pursuing a balanced policy whereby the state budget has been more or less balanced or in surplus. Reserves that had accumulated from budget surpluses enabled the Estonian government to avoid borrowing during the financial crisis. Because of that, the Estonian burden of debt was among the lowest in Europe. During the recession of 2009, the government was forced to increase taxes and cut spending to decrease the deficit, leading to a deficit that was very modest compared to the rest of the European Union, just 1.7% of GDP (Ministry of Education and Research, 2015).

The governance of the school system

An important regulatory role for the central government

School governance is fairly decentralised and involves two levels of administration: the central government and municipalities (rural municipalities and cities/towns). The government and the Ministry of Education and Research are responsible for national education policy and the overall strategy for the education system. The responsibilities of the Ministry include the supervision and development of the education system, establishing the framework for student learning objectives (national curriculum, see below), defining the levels and terms of funding, setting the requirements for the professional and pedagogical competence of educational staff, determining minimum salaries of teachers and managing the register of schools which are part of the school network.

The Ministry of Education and Research, with about 270 staff (as of March 2014), comprises departments in charge of areas such as planning, financing, analysis, teachers, external evaluation, state property and school network in addition to the ones associated with education levels. Some foundations also complement the work of the Ministry such as the Estonian Qualifications Authority (*Kutsekoda*) and the Innove Foundation. The Estonian Qualifications Authority takes responsibility for the occupational qualifications system as an interface between the labour market and the lifelong learning system enhancing the development, assessment and recognition of individuals' occupational competences. It keeps a register of occupational qualifications and co-ordinates the activities of sector skills councils. The Innove Foundation, with about 500 staff, has a large portfolio. It develops and implements qualifications and curricula in general and vocational education; co-ordinates career services; implements education projects supported by EU structural and investment funds; develops training and competency descriptions for school leaders; designs and offers professional development for teachers; supports student integration processes including for non-native speakers (Estonian language immersion classes); develops and implements external student assessment (full cohort Year 9 and Year 12 examinations and sample-based assessments in Year 3 and Year 6); collects and disseminates information about national examinations; and provides support to individual schools in a range of areas (e.g. language immersion).

Each county government, which represents the national government in the respective county territory, has an education department which essentially assumes a supervision, information and co-ordination role, often serving as a liaison between municipalities and the Ministry of Education and Research. The county education department may assume a role of co-ordination of education provision within the county in case municipalities welcome such initiative. However, this type of co-ordination is often limited to the organisation of networks of teachers and school leaders and the provision of information to parents and schools. The county education department has a more prominent role in the supervision of education services, through its inspection services, which operate under the guidance of the External Evaluation Department of the Ministry of Education and Research.

Bigger cities such as Tallinn, Tartu and Narva have greater capacity to organise an education department within their municipality, which can include quality assurance activities, co-ordination of the school network, and provision of assistance to schools (e.g. management of school budgets).

A mixed provision of education services

Three types of providers of education services exist: the state, the municipality and private. While for pre-primary education provision is granted by private providers and municipalities, in general and vocational education, the three types of providers offer competing education services. However, municipal provision is dominant in general education while state provision is dominant in vocational education. Private providers maintain a small proportion of students in each pre-primary, general and vocational education.

A range of policy consultation processes

The development of educational policies led by the Ministry of Education and Research involves a range of consultations with stakeholders. Legislative drafts on education policy are developed by the Ministry. The Ministry participates in the first phase

of legislative drafting, i.e. develops the concept, structure, scope of application, and initial text of the draft, and sets out the definitions. Stakeholders are consulted as the drafts are prepared. Stakeholders involved include the Association of Municipalities of Estonia, the Association of Estonian Cities, the Estonian Association of Heads of Schools, the Association of Teachers and Estonian Education Personnel Union, the Estonian School Student Council's Union, the Association of Parents, associations of private schools and representatives of businesses and employers.

Collaboration is also established through co-operation platforms. The Estonian Co-operation Assembly was established in 2007 as a co-operation network for non-governmental organisations. It monitors areas which influence Estonia's long-term development and develops proposals and policy advice for discussion with the government. The Education Forum, a non-governmental organisation, is a platform bringing together teacher organisations, local governments and education experts and practitioners to foster the discussion of education issues. The Estonian Co-operation Assembly and the Education Forum were the two partners of the Ministry of Education and Research for the elaboration of the "Estonian Lifelong Learning Strategy 2020" (see below).

Educational goals

General goals, policy objectives and targets

The Estonian Lifelong Learning Strategy 2020 (LLS) is the guiding document for the development of education policy for the period 2014-20. The LLS is aligned to the National Reform Programme "Estonia 2020", the Estonian national strategy for sustainable development ("Sustainable Estonia 21") and the education-related goals of the "National Security Concept of the Republic of Estonia". Five strategic goals have been established in the LLS:

- *Change in the approach to learning:* Implementation of an approach to learning that supports each learner's individual and social development, the acquisition of learning skills, creativity and entrepreneurship at all levels and in all types of education.
- *Competent and motivated teachers and school leadership:* The compensation of teachers and school leaders including their salaries are consistent with the qualification requirements for the job and the work-related performance.
- *Alignment of lifelong learning opportunities with the needs of the labour market:* Lifelong learning opportunities and career services that are diverse, flexible and of good quality, resulting in an increase in the number of people with professional or vocational qualifications in different age groups, and an increase in the overall participation in lifelong learning across Estonia.
- *A digital focus in lifelong learning:* Modern digital technology is used for learning and teaching effectively and efficiently. An improvement in the digital skills of the total population has been achieved and access to the new generation of digital infrastructure is ensured.
- *Equal opportunities and increased participation in lifelong learning:* All individuals are granted equal opportunities to participate in lifelong learning.

The LLS contains targets to be attained by 2020. These are indicated in Table 1.2.

Table 1.2. **2020 targets established by the Lifelong Learning Strategy**

Indicator	Target level 2020 (%)	Starting level (2012) (%)
Key indicators		
Participation rate in lifelong learning among adults (percentage of 25-64 year-olds who stated that they received education or training in the four weeks preceding survey	20	12.9
Percentage of adults (25-64) with general education only (no professional or vocational education)	≤ 25	30.3
Early school leavers (percentage of the population aged 18-24 with at most lower secondary education and not in education)	< 9	10.5
Top achievers in basic skills in:		
Reading	10	8.4
Mathematics	16	14.6
Science	14.4	12.8
Employment rate of recent graduates (20-34 years old graduates; one to three years after leaving education)	At least 82	73.9
Digital competencies (individuals aged 16-74 with computer skills)	80	65
Comparative general education teachers' salaries (ratio of teachers' salaries to earnings for full-time, full-year workers with tertiary education aged 25-64)	≥ 1.0	0.84 (2011)
Stakeholders' satisfaction with lifelong learning	Satisfaction has increased	–
I – Change in the approach to learning		
Low achievers in basic skills in:		
Reading	7.5	9.1
Mathematics	8	10.5
Science	5	5.0
Drop-out rate from lower-secondary compulsory education	< 1	0.6
Drop-out rate from:		
Vocational schools	< 20	25.8
General upper secondary education	< 0.8	1.1
Higher education institutions	< 15	21.3 (2011)
II – Competent and motivated teachers and school leadership		
Percentage share of teachers who are aged 30 or below	> 12.5	10.3
Competition for study places in teacher education	Competition has increased	–
Gender distribution of teachers in general education (female:male)	75:25	85.7:14.3
III – Alignment of lifelong learning opportunities with the needs of the labour market		
Share of tertiary graduates in Mathematics, Science and Technology as a percentage of all tertiary graduates	25	22
Share of basic education graduates who passed the career counselling	100	
Share of basic education graduates who continue their studies in vocational upper secondary education	35	28.6
Percentage distribution of upper secondary students by orientation (general:vocational)	60-40	67-33
Student mobility	10	3.5
IV – Digital focus in lifelong learning		
Share of students (ISCED 1-6) who use computers, digital and mobile personal devices for studies every school day	100	
Share of Year 8 students at digitally supportive schools	100	33
Share of Year 8 students in schools with a virtual learning environment	100	54
Share of basic education graduates whose ICT basic skills are assessed and certified	100	
V – Equal opportunities and increased participation in lifelong learning		
Tertiary education attainment, age group 30-34	40	39.1
Participants in early education (aged between 4 and compulsory starting age)	95	89.1 (2011)
Share of Russian-language school graduates who master the Estonian language at B1 level	90	56.5
Share of labour costs of governmental education expenditures	60	55 (2011)
Share of teachers' labour costs of governmental expenditures on general education	50	38 (2011)
Optimisation of the use of space in educational institutions (m^2)	3 million	3.5 million

Source: Ministry of Education and Research, the Estonian Co-operation Assembly and the Education Forum (2014), *The Estonian Lifelong Learning Strategy 2020*, *www.hm.ee/sites/default/files/estonian_lifelong_strategy.pdf*.

Student learning objectives

The Ministry of Education and Research establishes binding national curricula. The recently implemented 2011 curriculum reform defines standard-based learning targets to be achieved at the end of each three-year pedagogical cycle (Years 3, 6, 9, 12). The school is then required to develop a school-level curriculum within the framework of the national curriculum. The school-level curriculum is approved by the school director but involves the school staff and requires the advice of the board of trustees, the student council and the teacher council. Pre-primary schools as well as general and vocational education schools have, in addition to the curriculum, a development plan, which establishes the main development directions for the school and a plan of activities. The Innove Foundation also develops syllabuses for specific subjects/fields of study on the basis of the curriculum as well as methodological materials which are made available to schools and teachers through the dedicated website *www.oppekava.ee*. The preparation of school-level curricula is supervised by the Innove Foundation.

A new standard for vocational education was established on 1 September 2013. As of 1 September 2017, new students will be admitted only to school curricula that have been harmonised with this new standard. The new standard divides vocational education into qualification levels from second to fifth. The aim of the new approach is to ensure better linkages between work and education – new curricula will be prepared on the basis of professional standards and will be more practical, shorter and with a more flexible organisation of studies than current curricula. New output-based curricula will describe the content of studies as study outputs which will correspond to the competences required in the world of employment (Ministry of Education and Research, 2015). The learning outcomes of vocational training, the curricula, the requirements for the commencement and completion of studies, the structure and volume of the studies, and the principles for recognition of prior learning and professional experience are established at the national level (Ministry of Education and Research, 2015).

The organisation of the school system

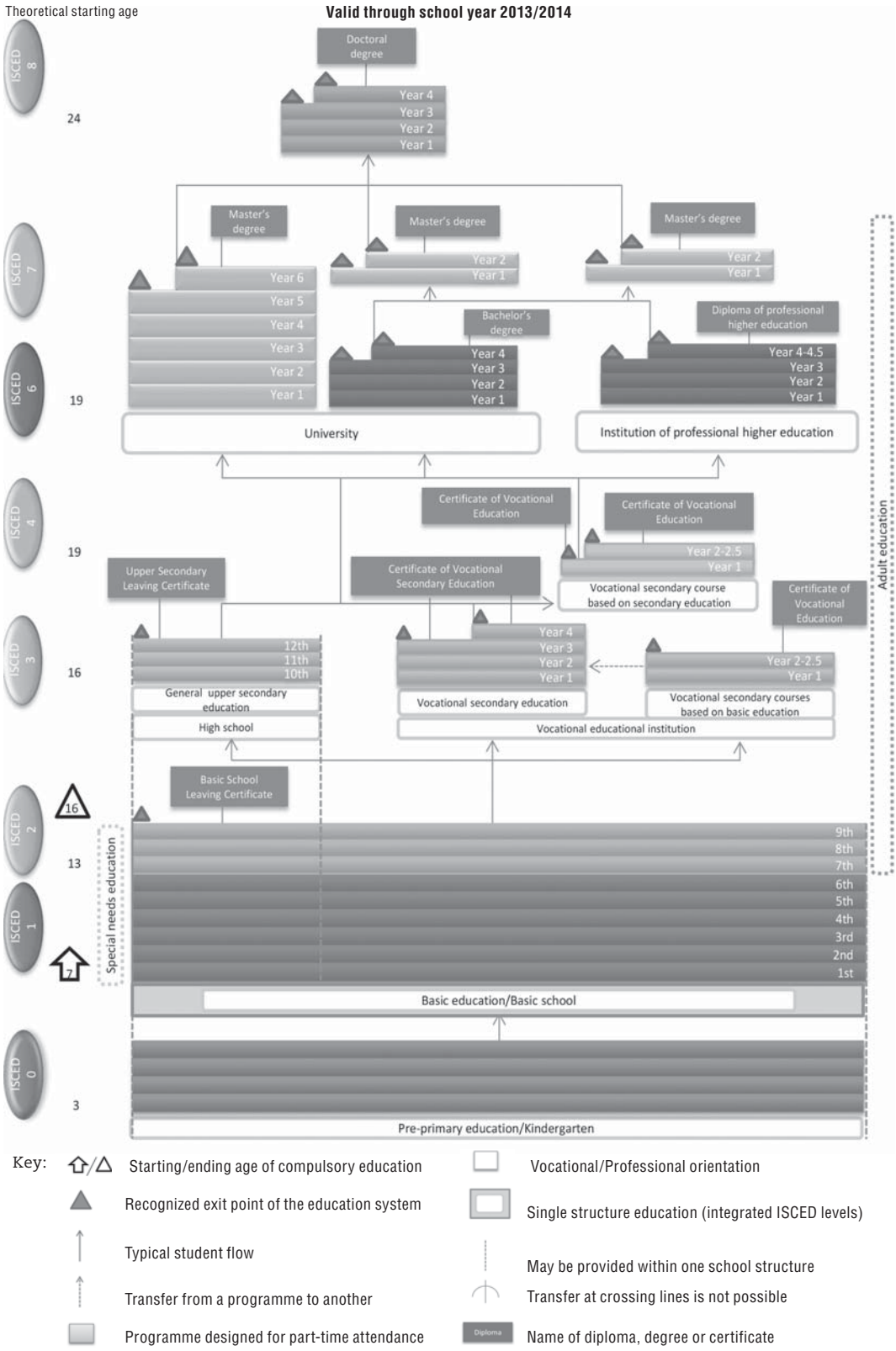
Overview

The school system in Estonia is organised in three sequential levels: pre-primary education (ISCED 0, up to 7 years of age), basic education (ISCED 1 and 2, typical ages: 7 to 16); and upper secondary education (ISCED 3, Years 10-12/13, typical ages: 16 to 18/19). Basic education is organised according to two stages: primary education (ISCED 1, Years 1-6); and lower secondary education (ISCED 2, Years 7-9) (see Figure 1.5). School attendance is compulsory until acquiring basic education or attaining age 17.

Upper secondary education is of two types:

- **General upper secondary education,** mainly geared to the continuation of studies at higher education level (ISCED 3A programmes, Years 10-12).
- **Vocational upper secondary education** with two major strands:
  - **Vocational secondary education,** geared to working life or the continuation of studies at higher education level (ISCED 3B programmes, 3 to 4 years duration).
  - **Vocational secondary courses based on basic education,** geared towards an initial qualification for students, giving priority to their entering the job market while, at the same time, allowing them to study further (but with no direct transition to higher education) (ISCED 3C programmes, 2 to 2.5 years duration).

Figure 1.5. **The Estonian education system**



Source: OECD (no date), Education GPS, *http://gpseducation.oecd.org*.

Pre-primary education

There are three types of pre-primary institutions:

- *crèche* (for children up to 3 years of age)
- pre-primary school (for children up to 7 years of age)
- pre-primary school for children with special needs (up to 7 years of age).

In pre-primary schools, groups are organised according to the age of children: younger (between 3 and 5 years of age); medium-aged (between 5 and 6 years of age), and older ones (between 6 and 7 years of age). If the pre-school is not large enough to organise groups based on age, a mixed group can be formed to accommodate children of different ages. The size of each group is regulated by the Preschool Child Care Institutions Act, as follows:

- up to 14 children in a *crèche* group
- up to 20 children in a pre-school group
- up to 18 children in a mixed group.

The number of children in a *crèche* group can be increased by two, in the pre-school group by four and in a mixed group by two if the board of trustees of a pre-primary institution requests it.

Responsibility for providing public pre-primary education lies with the municipalities, including its financing. The Preschool Child Care Institutions Act requires the municipality to provide pre-primary education services to all children aged 1.5-7 years. This provision is complemented by privately-run pre-primary education (only about 4% of enrolled students in 2013-14) (see Table 1.3 and Figure 1.6). More than half of the privately-owned pre-primary schools are located in Harju County and Tartu County which have the highest demand for pre-primary education places. In the recent years, municipalities have faced difficulties in providing pre-primary education for all who demand it, which explain the expansion of children in private pre-primary schools.

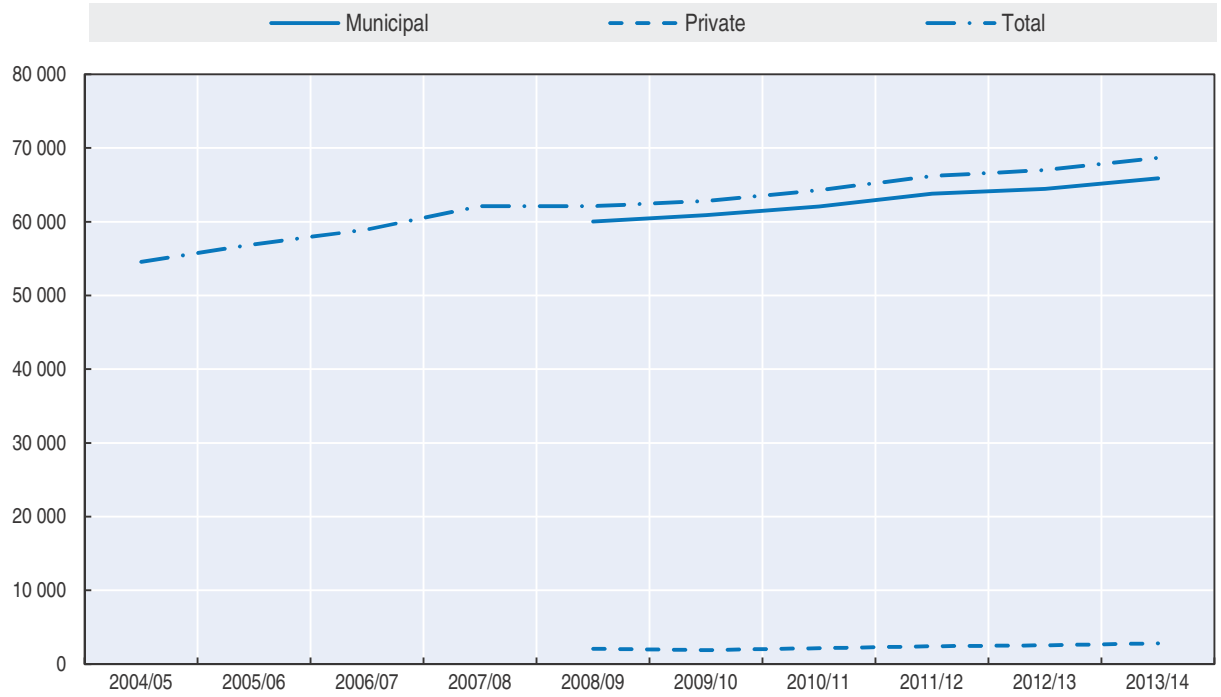
Table 1.3. **Number of schools and students, by ownership, pre-primary education, 2004/05 to 2013/14**

School year	Number of schools			Total number of students	Proportion of students	
	Municipal	Private	Total		Municipal	Private
2004/05	..	..	609	54 560	..	..
2005/06	..	..	620	56 953	..	..
2006/07	..	..	624	58 934	..	..
2007/08	..	..	636	62 116	..	..
2008/09	591	46	637	62 110	96.6	3.4
2009/10	592	43	635	62 804	96.9	3.1
2010/11	596	42	638	64 259	96.6	3.4
2011/12	597	46	643	66 207	96.3	3.7
2012/13	596	48	644	67 034	96.2	3.8
2013/14	595	57	652	68 684	95.9	4.1

.. Not available.

Source: Ministry of Education and Research (2015a), *OECD Review of Policies to Improve the Effectiveness of Resource Use in Schools: Country Background Report for Estonia*, *www.oecd.org/education/schoolresourcesreview.htm*.

Figure 1.6. **Number of children enrolled in pre-primary education, by type of ownership, 2004/05 to 2013/14**



Source: Ministry of Education and Research (2015a), *OECD Review of Policies to Improve the Effectiveness of Resource Use in Schools: Country Background Report for Estonia*, *www.oecd.org/education/schoolresourcesreview.htm*.

Municipalities are allowed to charge fees for pre-primary education attendance, even if many of them do not. According to the Law, if a tuition fee applies, the contribution payable by parents per one child may not exceed 20% of the nationally established minimum salary (in 2014, EUR 71 per month). In private pre-primary schools, the tuition fee is usually higher than in municipal ones (Ministry of Education and Research, 2015).

Enrolment in pre-primary education has grown considerably in the last few years. From 2005 to 2014, the number of pre-primary institutions grew by 7.1% (by 43 institutions) and the number of children attending pre-primary institutions grew by 25.9% (by 14 124 children) (Ministry of Education and Research, 2015). Figure 1.6 shows the enrolment growth from 2004/05 to 2013/14. Enrolment in pre-primary education is above the OECD average and has increased in recent years. In 2012, the enrolment rates were 89%, 91% and 91% at ages 3, 4 and 5 against OECD averages of 70%, 84% and 94% respectively. In 2005, the respective enrolment rates were 81%, 84% and 88% (OECD, 2014b).

General education

All children attaining age 7 before 1 October of the current year must attend school. Basic education (primary and lower secondary education) consists of a single school stage, from Year 1 to Year 9, providing comprehensive general education to students. General education includes basic education as well as general upper secondary education. Upper secondary education is not compulsory, though is attained by the vast majority of the population (see below).

In general education (at either the lower or upper secondary levels), students have the possibility of acquiring preliminary vocational knowledge in the form of elective subjects amounting to 15-40 study weeks. A large share of students take advantage of this form of education and acquire vocational knowledge, the most popular areas being music, hotel industry, tourism management and metalwork. However, the wider provision of preliminary vocational training is impeded mainly by the limited level of interest expressed by general education schools (Ministry of Education and Research, 2015).

At general education schools, students are divided into groups usually according to age. In basic education, the maximum number of students in a class is 24, even if with the agreement of the school's board of trustees it can reach 26. In upper secondary education, student groups may also be formed on the basis of students' choices to study certain elective courses (Ministry of Education and Research, 2015). The maximum weekly workload of a basic school student is regulated nationally, standing at the following number of lessons: Year 1: 20; Year 2: 23; Years 3-4: 25; Year 5: 28; Years 6-7: 30; and Years 8-9: 32.

General education schools can be state, municipally or privately owned. The majority of general education schools are municipally owned. However, the number of municipal schools has dropped due to the decrease in the number of students, whereas the number of private schools has increased. The latter are usually located in major cities, where the total number of students has grown due to internal migration (see Table 1.4).

Table 1.4. **Number of schools by ownership, general education, 2005/06 to 2013/14**

School year	School ownership			
	State	Municipal	Private	Total
2005/06	31	537	33	601
2006/07	31	527	31	589
2007/08	31	517	29	577
2008/09	30	506	34	570
2009/10	29	501	33	563
2010/11	29	487	33	549
2011/12	29	479	36	544
2012/13	29	470	37	536
2013/14	30	467	47	544

Notes: Data refer to "stationary studies" (aimed at individuals compelled to attend school or whose learning is both a full-time activity and the related school-level instruction is more important than independent learning). Data include all general education, including adult upper secondary schools and special schools.
Source: Ministry of Education and Research (2015b), *Haridussilim* (The Eye of Education), *www.haridussilm.ee*, based on the Estonian Education Information System (*Eesti Hariduse InfoSüsteem*, *www.ehis.ee*).

Enrolment in general education has decreased considerably in the last decade. This is the case for each primary, lower secondary and general upper secondary education (see Table 1.5 and Figure 1.7). The great majority of students in general education attend municipally-owned schools in spite of a small increase in private provision in basic education and a more significant increase of provision by the state in upper secondary education between 2005/06 and 2013/14 (see Table 1.5 and Figure 1.8).

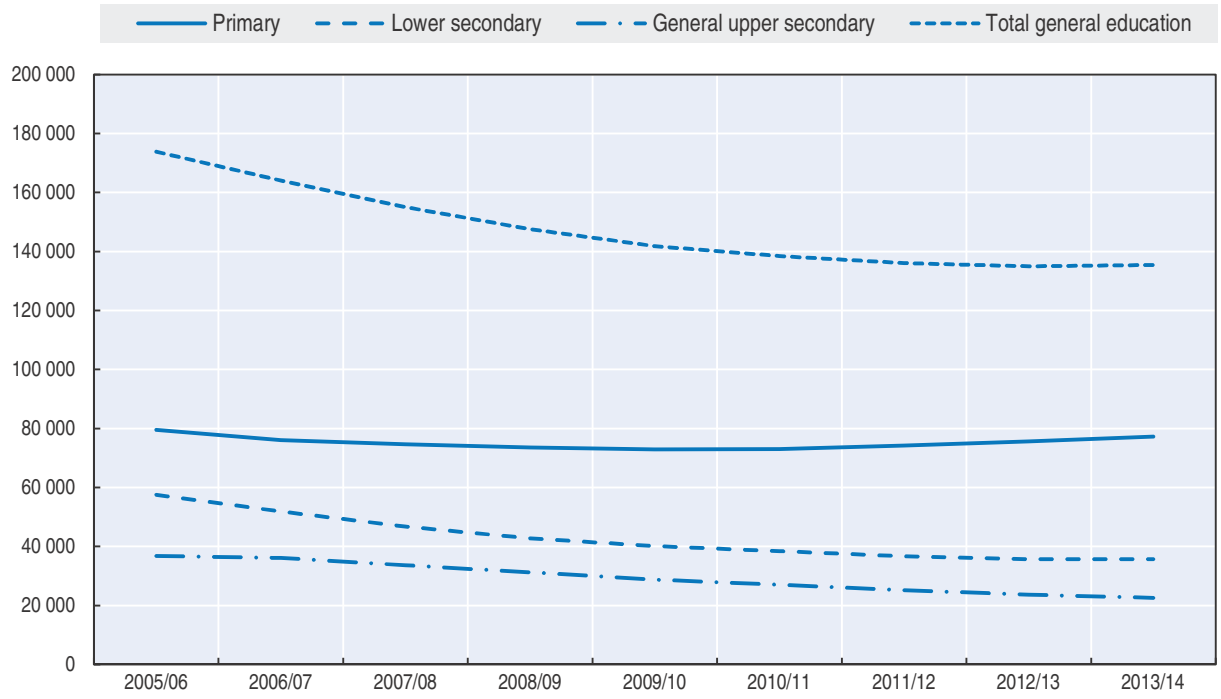
After graduating from basic school, 68% of graduates attend general upper secondary education, 28% attend vocational upper secondary education and 4% do not pursue further studies (based on averages for 2005-14, Ministry of Education and Research, 2015). Regarding the transition between basic and upper secondary school, 43% of the students

Table 1.5. **Number of students by education level and school ownership, general education, 2005/06 to 2013/14**

School year	Education level			School ownership			Total
	Primary	Lower secondary	Upper secondary	State	Municipal	Private	
2005/06	79 561	57 531	36 730	3 794	165 636	4 392	173 822
2006/07	76 005	51 894	36 125	3 560	156 047	4 417	164 024
2007/08	74 618	46 787	33 666	3 434	146 951	4 686	155 071
2008/09	73 555	42 699	31 265	3 294	138 502	5 723	147 519
2009/10	72 947	40 136	28 719	3 191	133 022	5 589	141 802
2010/11	73 035	38 420	26 993	3 215	129 604	5 629	138 448
2011/12	74 231	36 699	25 174	3 121	127 120	5 863	136 104
2012/13	75 624	35 711	23 640	3 442	125 310	6 223	134 975
2013/14	77 200	35 683	22 509	3 862	124 657	6 873	135 392

Notes: Data refer to "stationary studies" (aimed at individuals compelled to attend school or whose learning is both a full-time activity and the related school-level instruction is more important than independent learning). Data include all general education, including adult upper secondary schools and special schools.
Source: Ministry of Education and Research (2015b), *Haridussilim* (The Eye of Education), *www.haridussilm.ee*, based on the Estonian Education Information System (*Eesti Hariduse InfoSüsteem*, *www.ehis.ee*).

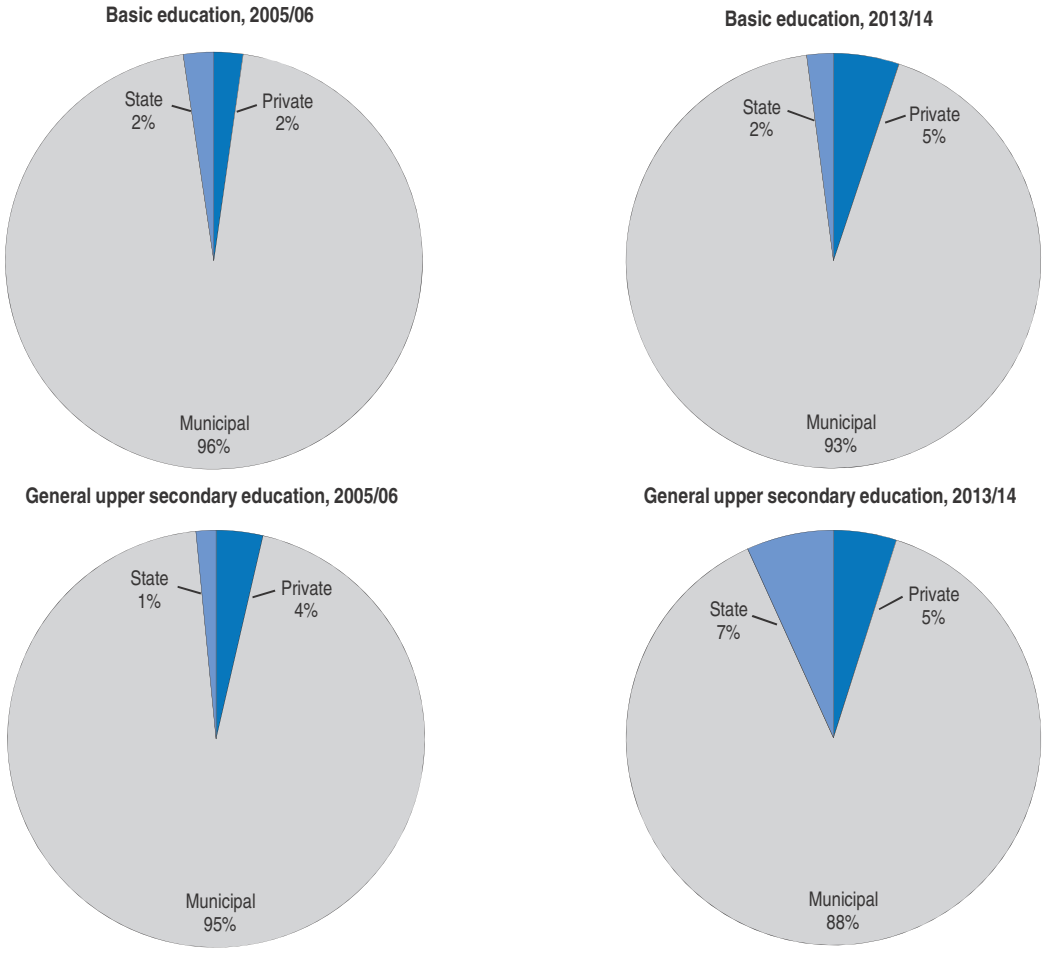
Figure 1.7. **Number of children enrolled in primary, lower secondary and general upper secondary education, 2005/06 to 2013/14**



Notes: Data refer to "stationary studies" (aimed at individuals compelled to attend school or whose learning is both a full-time activity and the related school-level instruction is more important than independent learning). Data include all general education, including adult upper secondary schools and special schools.
Source: Ministry of Education and Research (2015b), *Haridussilim* (The Eye of Education), *www.haridussilm.ee*, based on the Estonian Education Information System (*Eesti Hariduse InfoSüsteem*, *www.ehis.ee*).

remain in the same school, 23% move to another school in the same municipality, 18% move to another school in the same county, 11% move to another school in another county while 4% do not pursue further studies (based on averages for 2005-11, Ministry of Education and Research, 2015a).

Figure 1.8. **Distribution of general education students according to school ownership, 2005/06 and 2013/14**



Notes: Data refer to "stationary studies" (aimed at individuals compelled to attend school or whose learning is both a full-time activity and the related school-level instruction is more important than independent learning). Data include all general education, including adult upper secondary schools and special schools.
Source: Ministry of Education and Research (2015b), *Haridussilim* (The Eye of Education), *www.haridussilm.ee*, based on the Estonian Education Information System (*Eesti Hariduse InfoSüsteem*, *www.ehis.ee*).

Vocational education

There is a range of options to acquire vocational education in Estonia. As explained earlier, at the upper secondary level, following completion of basic education, students can opt for vocational secondary education (geared to working life or tertiary education, ISCED 3B) or vocational secondary courses based on basic education (targeted at acquiring a profession, ISCED 3C). However, vocational education can also be acquired at two other distinct levels:

- Post-secondary non-tertiary level (ISCED 4B), acquisition of a profession following general or vocational secondary education.
- Lower-secondary level (ISCED 2C), acquisition of a profession for students who have not acquired basic education and who are past the age of compulsory school attendance (older than 17), giving the possibility of completing basic education.

Vocational education is provided by the state, municipalities and private entities. Provision by the state is dominant (see Table 1.6). In addition, vocational education can be acquired in institutions of professional higher education.

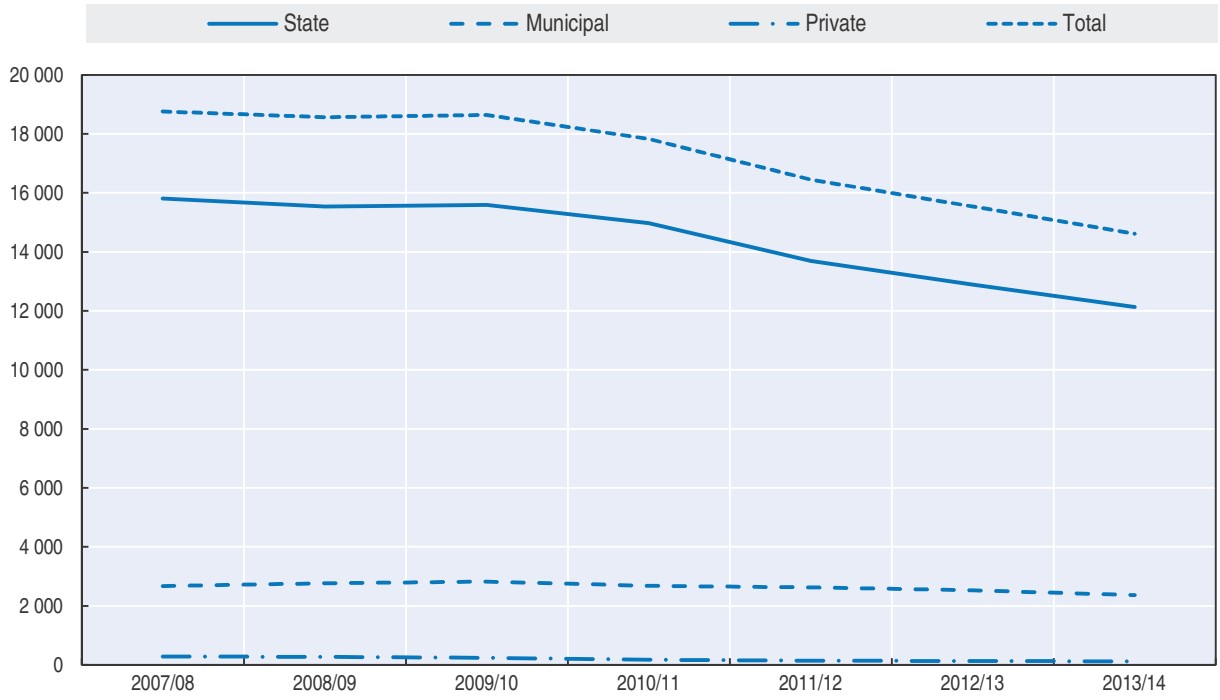
Table 1.6. **Number of schools and students in vocational secondary education by school ownership, 2007/08 to 2013/14**

School year	Number of schools				Number of students			
	State	Municipal	Private	Total	State	Municipal	Private	Total
2007/08	32	3	12	47	15 811	2 665	285	18 761
2008/09	31	3	11	45	15 535	2 760	272	18 567
2009/10	31	3	11	45	15 596	2 816	233	18 645
2010/11	30	3	10	43	14 974	2 682	176	17 832
2011/12	30	3	9	42	13 689	2 625	135	16 449
2012/13	29	3	9	41	12 894	2 522	123	15 539
2013/14	29	3	8	40	12 133	2 369	119	14 621

Source: Ministry of Education and Research (2015b), *Haridussilim* (The Eye of Education), *www.haridussilm.ee*, based on the Estonian Education Information System (*Eesti Hariduse InfoSüsteem*, *www.ehis.ee*).

The number of students in vocational education decreased about 22% between the 2007/08 and the 2013/14 school years, with decreases of 23%, 11% and 58% in the state, municipal and private sectors respectively (see Figure 1.9). This was mostly due to the decrease in the number of students graduating from basic school (Ministry of Education and Research, 2015a).

Figure 1.9. **Number of children enrolled in vocational education at secondary level by school ownership, 2007/08 to 2013/14**



Source: Ministry of Education and Research (2015b), *Haridussilim* (The Eye of Education), *www.haridussilm.ee*, based on the Estonian Education Information System (*Eesti Hariduse InfoSüsteem*, *www.ehis.ee*).

The network of vocational schools administered by the state has undergone major changes since Estonia regained independence. Today, all state-owned vocational schools are managed by the Ministry of Education and Research. Previously, vocational schools were also under other ministries such as the Ministry of Agriculture, the Ministry of Defence and the Ministry of the Interior. The number of state-owned vocational schools peaked in 1994 when all ministries together administered 77 vocational schools.

There are currently three municipal vocational schools in Estonia, including the Tartu Vocational Education Centre which is the largest by far among the vocational establishments in Estonia. The lack of interest of municipalities in running vocational schools results from their low administrative capacity as well as their limited possibilities of investing in and developing the schools. The first private vocational schools in Estonia were established in 1994 and their number grew fast – reaching 26 by 2002. Mostly, the specialties available in private institutions of vocational education include IT, catering and hair dressing. Over the years, students of private vocational schools have formed no more than 3% of the total number of vocational education students and 1.5% of state-financed commissioned education (Ministry of Education and Research, 2015a).

Considerable investments were made between 2004 and 2011 in improving vocational education infrastructure. For example, facilities were renovated in ten vocational educational institutions with funds from the European Regional Development Fund (ERDF). Then, during 2009-11, further investments were made on vocational educational institutions to modernise the learning environment, mostly financed from the European Social Fund (ESF) (Ministry of Education and Research, 2015a).

School providers and school types

A state school is established by the Minister of Education and Research. A municipal school is established by the rural municipality or city/town council and a private school is established by a private organisation. The establishment of a school involves a licensing process.

There are various types of general education schools (see Table 1.7). For example, there are preschool/schools which combine the provision of pre-primary and general education, including Years 1-4, 1-6 or 1-9, as well as primary schools accommodating Years 1-4 or 1-6. Moreover, general education can also be acquired in basic schools (Years 1-9), full cycle schools (Years 1-12) and upper secondary schools (Years 10-12).

Table 1.7. **Number of general education schools by type, 2013/14**

Type of school (educational levels covered)	Number
Primary school with pre-primary education (pre-primary and primary education)	37
Primary school (primary education only)	36
Basic school with pre-primary education (pre-primary, primary, and lower secondary education)	14
Including schools for special needs	2
Basic school (primary and lower secondary education)	251
Including schools for special needs	36
Full-cycle schools (primary, lower and upper secondary education)	189
Including schools for special needs	4
Upper secondary school (general upper secondary education only, also called Gymnasium)	13

Source: Ministry of Education and Research (2015a), *OECD Review of Policies to Improve the Effectiveness of Resource Use in Schools: Country Background Report for Estonia*, *www.oecd.org/education/schoolresourcesreview.htm*.

Extracurricular activities

Basic schools typically organise "long day groups" after regular curricular instruction. Long day groups are offered to students in Years 1 to 9 and are formed at the request of the parents. They are designed to assist students in doing their homework, and to engage them in a variety of recreational activities. Students in long day groups must be provided an additional meal at the school which is paid for by parents (Ministry of Education and Research, 2015a).

Language of instruction

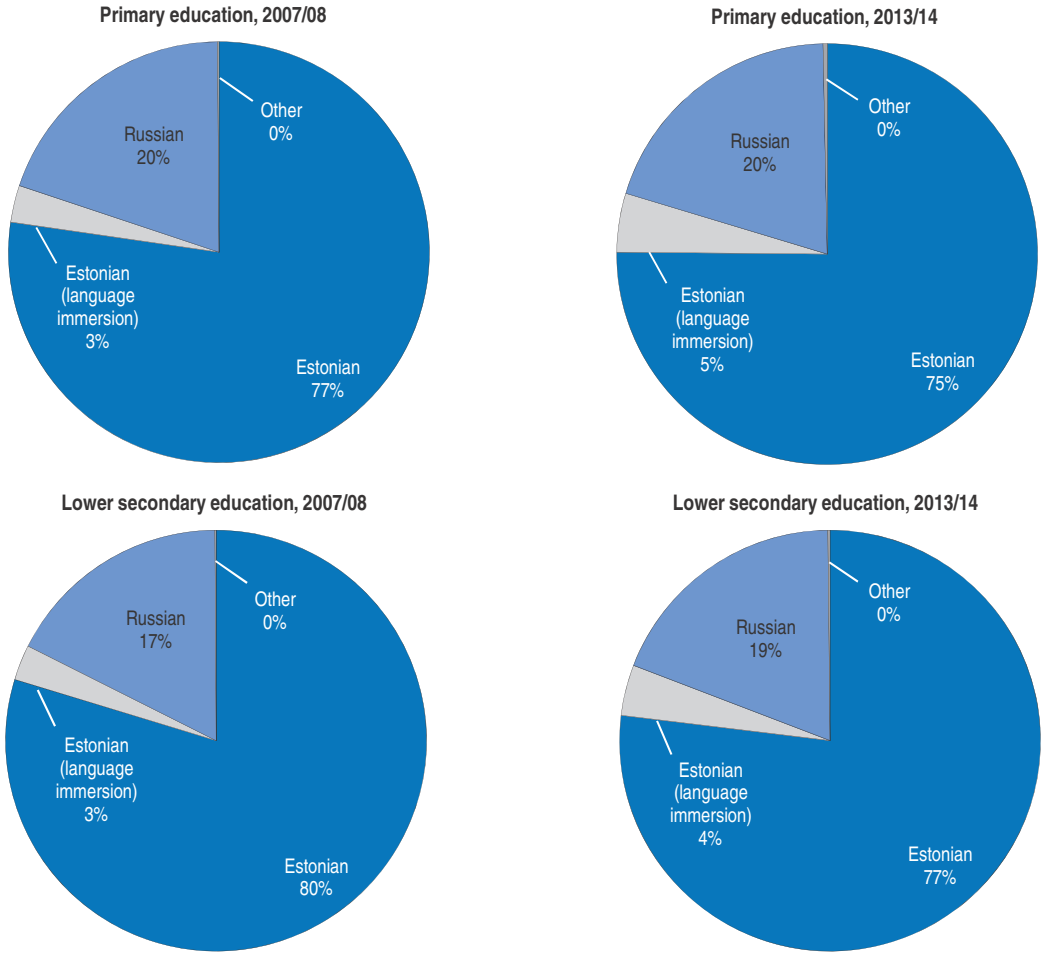
The language of instruction in schools is generally Estonian. However, given its large Russian-speaking community, the Estonian school system also provides for instruction in Russian language. Estonia has pre-primary, basic and vocational schools where instruction is provided in Russian language and where Estonian is offered as a foreign language. Schools with these provisions are primarily located in Tallinn and Ida-Viru County (north-east of Estonia) where most of the Russian-speaking population lives. In 2007 new regulations stipulated that Russian, as a language of instruction in general upper secondary education, would be progressively replaced by bilingual instruction (content taught in Estonian and Russian, with at least 60% of the content in Estonian), with most of the implementation occurring in the 2011/12 school year. In addition to Russian, general education can also be acquired in English and Finnish, with this opportunity being available only in the two largest cities – Tallinn and Tartu (Ministry of Education and Research, 2015a).

The most important initiative aimed at improving the Estonian language competencies of Russian-speaking children in basic education has been the network of schools with the Estonian Language Immersion programme (*Keelekümblus*). The programme was funded and supported by the Canadian International Development Agency (CIDA) and was based on a language immersion programme launched in 1965 in Quebec, Canada. The Integration Foundation that operates the programme was established by the Estonian government in 1998 and its implementation started in a small number of schools in 2000. As of 2013/14, about 40 schools were participating in the programme on a voluntary basis.

The language immersion programme introduced the rule of 60% of content taught in Estonian, which later became one of the most important pillars of the new 2007 regulations for general upper secondary education. The programme is operated in pre-primary schools and basic schools and comes in two variants: early immersion in which education starts with full Estonian language instruction in the late years of pre-primary education or in Year 1, and 10% Russian language instruction introduced only in Year 1 or Year 2. Then the proportion of Russian language instruction gradually increases up to Year 6 (when 44% of subjects are taught in Russian). In 2003 the programme was supplemented with a late immersion version from Year 6 (or Year 5, in some schools), in which the annual proportion of content taught in Estonian up to the end of basic education is 33%, 76%, 76% and 60% in Years 6, 7, 8 and 9 respectively. The programme, financed by the Ministry, has built a support system of teaching materials, trainers and counsellors.

Figure 1.10 displays the distribution of students according to the language of instruction in primary and lower secondary education for the 2007/08 and 2013/14 school years. Russian is the language of instruction for about 20% of the student population at these educational levels while the language immersion programme has expanded only slightly

Figure 1.10. **Distribution of students according to language of instruction, primary and lower secondary education, 2007/08 and 2013/14**

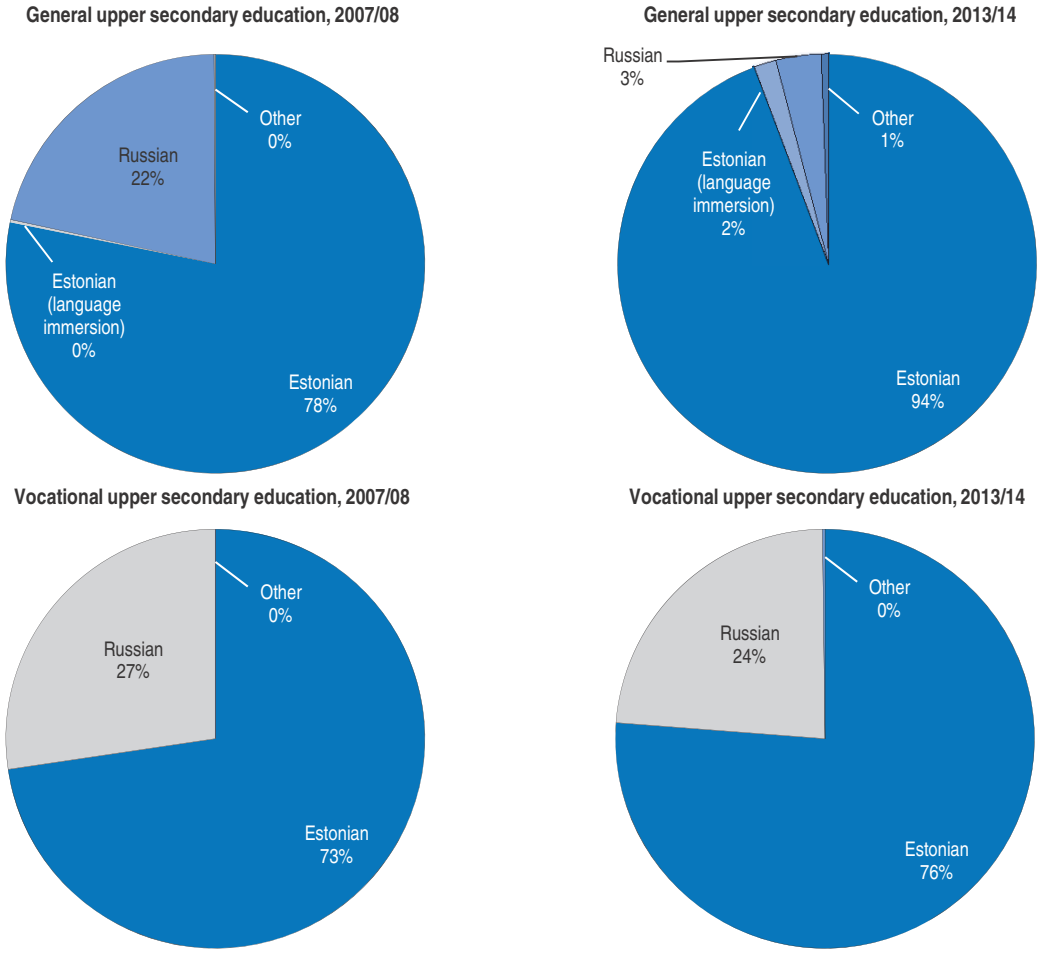


Notes: A student is considered as having Estonian (Russian) as the language of instruction if at least 60% of the subjects are taught in Estonian (Russian). A student is considered as having "Estonian (language immersion)" as the language of instruction if he or she is part of the Language Immersion programme.
Source: Ministry of Education and Research (2015b), *Haridussilim* (The Eye of Education), *www.haridussilm.ee*, based on the Estonian Education Information System (*Eesti Hariduse InfoSüsteem*, *www.ehis.ee*).

between 2007/08 and 2013/14. Figure 1.11 displays the distribution of students according to the language of instruction in upper secondary education for the 2007/08 and 2013/14 school years. In general upper secondary education, the results of the 2007 reform are visible as the proportion of students with Russian as the language of instruction declined from 22% to 3% between 2007/08 and 2013/14 while the language immersion programme remains marginal. By contrast, in vocational upper secondary education, in 2013/14, the proportion of students taught in Russian remained significant (24%).

Also, in schools with enough concentration of students whose native language is not the language of instruction, the Ministry of Education and Research also organises language and cultural instruction in the relevant language. In addition to the Estonian Language Immersion programme (*Keelekümblus*), the Ministry of Education and Research also supports and finances Estonian language-related professional training for teachers and informal activities for students in schools with Russian as the language of instruction.

Figure 1.11. **Distribution of students according to language of instruction, upper secondary education, 2007/08 and 2013/14**



Note: A student is considered as having Estonian (Russian) as the language of instruction if at least 60% of the subjects are taught in Estonian (Russian). A student is considered as having "Estonian (language immersion" as the language of instruction if he or she is part of the Language Immersion programme.
Source: Ministry of Education and Research (2015b), *Haridussilim* (The Eye of Education), *www.haridussilm.ee*, based on the Estonian Education Information System (*Eesti Hariduse InfoSüsteem*, *www.ehis.ee*).

Career guidance

As of 1 September 2014, new regional counselling centres (*Rajaleidja* centres, also called Pathfinder centres), managed by the Innove Foundation, started operating in all counties. They provide career and study counselling services for children and young people up to 26 years of age, for whom the service is free. These centres provide advice in a range of areas such as career guidance, special education, psychology, speech therapy and social pedagogy. Services require collaboration with school staff, parents and special needs practitioners. Regional counselling centres are under the umbrella of Innove's Agency for Lifelong Guidance. The Agency provides lifelong guidance, develops career guidance services and counselling services for special educational needs and supports guidance practitioners. It has a range of roles such as quality assurance of lifelong guidance; training of guidance practitioners; information materials and methodologies; and co-operation

with stakeholder networks. Municipalities (particularly smaller ones) and schools have the opportunity to contract for support specialists (e.g. special educators, psychologists) and services from the regional counselling centres.

Each counselling centre *Rajaleidja* also operates a Counselling Committee entrusted with guiding students with special educational needs and learning difficulties. For instance, they make recommendations on the postponement of school attendance, admission to school of a child below seven years of age, and the organisation of the teaching for students with special educational needs. It is planned to move the diagnostic of special needs to the regional counselling centres.

Counselling for special education needs is of four kinds:

- *Special education counselling:* recommending appropriate teaching methodologies, individual curriculum changes, teaching forms, materials and learning strategies for a child with special educational needs.
- *Speech therapy:* diagnosing speech disorders, developing and improving formation and understanding abilities of a child's oral and written speech.
- *Psychological counselling:* assessing the child's psychological development and factors influencing it, supporting appropriate development in co-operation with teachers, parents, and other specialists.
- *Socio-pedagogical counselling:* supporting the child's development and education in case of social problems, co-ordinating activities for pedagogical problems prevention and solution.

Students with special needs

Students with special needs learn in four possible settings: i) regular classes in mainstream schools; ii) special classes formed in mainstream schools; iii) special education schools; and iv) at home. Current policy encourages the integration of students with special needs in regular classes but this only occurs when deemed feasible. The state and municipalities take responsibility for finding the appropriate option for a student with special needs to be integrated in mainstream schooling. If the school nearest to the residence of the student with special needs does not have the conditions to meet her or his needs, the student has the right to study at the nearest school which meets them, while the municipality of the student's residence covers the transportation costs involved.

In Estonia, children with special educational needs are defined as those whose talent, specific learning difficulties, health status, disability, behavioural and emotional disorders, longer-term absence from studies or insufficient proficiency in the language of instruction of a school, bring about the need to make changes or adjustments in the subject matter, process, duration, workload, environment of study (e.g. teaching materials, teachers who have received special training) or in the expected children's learning outcomes (Ministry of Education and Research, 2015a). The identification of a special educational need involves pedagogical-psychological assessment, behaviour observation and medical examinations. Gifted students are identified on the basis of standardised tests carried out by licensed specialists, results in national or international subject Olympiads, and other assessments. These processes are supervised by the Counselling Committees operated by the regional counselling centres, which make recommendations regarding the best approach to address the special needs of a student. A child development observance chart is prepared for each

student with special educational needs, which allows the monitoring of his or her development. Gifted students benefit from the development of an individual curriculum and, when necessary, additional instruction by subject teachers or other specialists.

In mainstream schools, the school director typically appoints a special educational needs co-ordinator who organises the provision of education services for students with special educational needs, including ensuring proper co-ordination between support specialists and teachers. The special needs co-ordinator also supervises the identification of special needs at the school and liaises with support specialists, teachers, parents and the Counselling Committee.

Special education schools, with specific facilities, are attended by students with special education and behavioural needs, who mostly have visual, speech or hearing impairments, mobility disability, intellectual disability, emotional and behavioural disorders or who require special treatment. Most of these schools are state or municipally owned, and very few private schools exist (see Table 1.8). Yet, the state provides support to all special education schools, regardless of whether these schools are state, municipally or privately owned, depending on the number of students and the severity of their disability. In the 2013/14 school year, the average size of a special school was 81 students (Ministry of Education and Research, 2015a).

Table 1.8. **Number of schools for special education and respective enrolment by ownership, 2008/09 to 2013/14**

School year	Number of schools				Number of students			
	State	Municipal	Private	Total	State	Municipal	Private	Total
2007/08	27	14	4	45	2 291	1 778	108	4 177
2008/09	26	14	5	45	2 119	1 750	141	4 010
2009/10	25	13	5	43	2 011	1 651	138	3 800
2010/11	25	13	5	43	2 008	1 630	131	3 769
2011/12	25	13	6	44	1 890	1 565	161	3 616
2012/13	24	13	6	43	1 772	1 573	145	3 490
2013/14	23	13	6	42	1 651	1 598	136	3 385

Note: Some "home education" students are associated with a given school and taken into account in the data above. This is in contrast to the equivalent data presented in Table 1.9.
Source: Ministry of Education and Research (2015b), *Haridussilim* (The Eye of Education), *www.haridussilm.ee*, based on the Estonian Education Information System (*Eesti Hariduse InfoSüsteem*, *www.ehis.ee*).

Special schools do not provide vocational education. Hence, special education students with an interest in vocational education are integrated in regular vocational schools. In 2013, special education students accounted for 6% of all vocational education students. Generally, they are integrated in regular classes. However, special groups can be established if several students with special needs want to study the same specialty and a special group improves the study conditions of the group (Ministry of Education and Research, 2015a).

General education can also be acquired at home, at the request of a parent or due to the child's health condition. Home education due to a health condition is organised by the school assigned to the child. The school, in co-operation with the parents, prepares an individualised curriculum taking into account the child's abilities and special needs as well as the compulsory subjects in the national curriculum, relying on the recommendations of

the attending physician or specialist and the Counselling Committee. Home education at the request of a parent is organised and financed by the parent, who is also responsible for meeting the study goals. In this case, the child also has an individualised curriculum and benefits from free textbooks and other school materials.

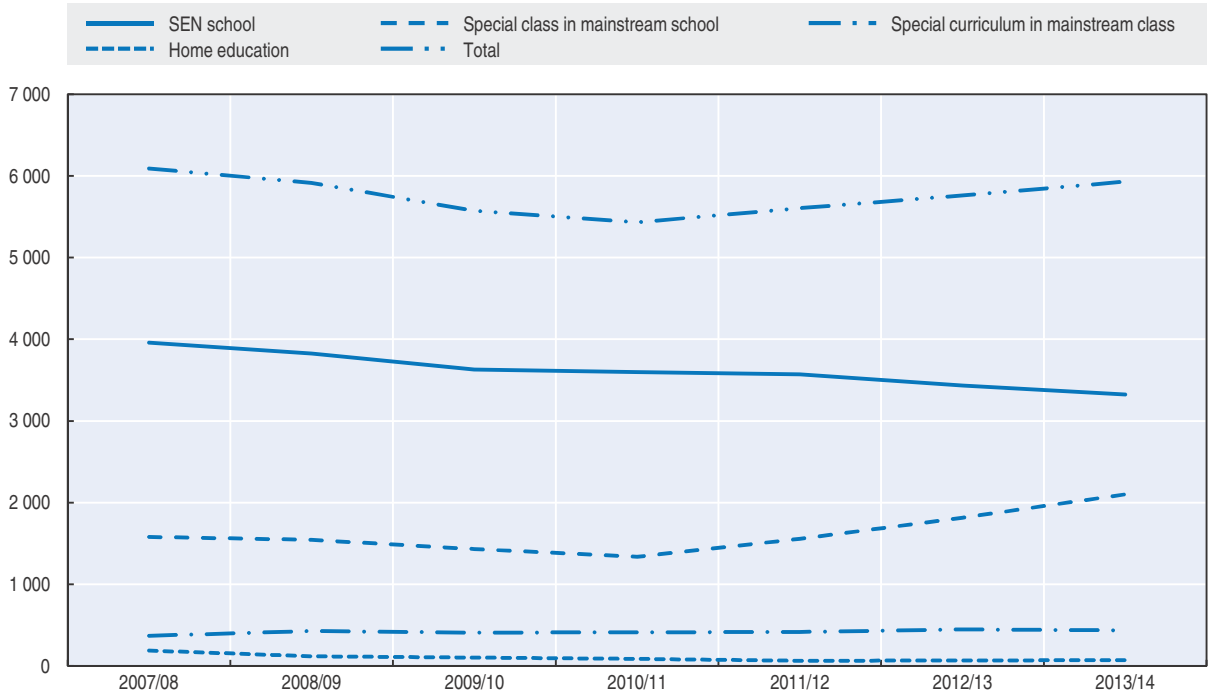
Table 1.9 and Figure 1.12 show the number of students with special educational needs by type of provision and type of curriculum between 2007/08 and 2013/14. In this period, the overall number of students identified as having special educational needs has remained stable. However, the provision setting has changed: while the proportion of special needs students educated in special schools has decreased, the proportion of special needs students educated in mainstream schools has increased but this has essentially occurred through the expansion of special classes in mainstream schools. The proportion of special education students educated in regular classes has remained fairly stable during this period. In 2013/14, the proportion of students with special educational needs in the school system was 4.4% while it was 3.9% in 2007/08 (Ministry of Education and Research, 2015a).

Table 1.9. **Number of students with special educational needs, by type of provision and type of curriculum, 2007/08 to 2013/14**

Type of study	Type of curriculum	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14
School for students with special educational needs (SEN school)	National curriculum at all levels	1 562	1 502	1 373	1 390	1 455	1 431	1 419
	Simplified curriculum for basic school	1 482	1 384	1 334	1 283	1 225	1 170	1 112
	Coping curriculum for basic school	913	941	922	924	644	603	579
	Nursing curriculum for basic school					245	230	214
	Total	**3 957**	**3 827**	**3 629**	**3 597**	**3 569**	**3 434**	**3 324**
	Proportion (%)	**65.0**	**64.7**	**65.1**	**66.2**	**63.7**	**59.6**	**56.1**
Special class in mainstream school	National curriculum at all levels	1 233	1 149	1 020	967	1 180	1 408	1 631
	Simplified curriculum for basic school	223	303	319	311	318	348	424
	Coping curriculum for basic school	122	91	93	60	44	44	32
	Nursing curriculum for basic school					14	14	13
	Total	**1 578**	**1 543**	**1 432**	**1 338**	**1 556**	**1 814**	**2 100**
	Proportion (%)	**25.9**	**26.1**	**25.7**	**24.6**	**27.8**	**31.5**	**35.4**
Special curriculum in regular class	Simplified curriculum for basic school	360	419	397	403	408	442	428
	Coping curriculum for basic school	8	8	10	9	7	5	6
	Total	**368**	**427**	**407**	**412**	**415**	**447**	**434**
	Proportion (%)	**6.0**	**7.2**	**7.3**	**7.6**	**7.4**	**7.8**	**7.3**
Home education (medical reasons)	Simplified curriculum for basic school	139	78	61	49	32	24	18
	Coping curriculum for basic school	38	37	37	29	10	12	15
	Nursing curriculum for basic school					18	26	34
	Total	**177**	**115**	**98**	**78**	**60**	**62**	**67**
	Proportion (%)	**2.9**	**1.9**	**1.8**	**1.4**	**1.1**	**1.1**	**1.1**
Home education (parents' wish)	Simplified curriculum for basic school	8	4	6	5	3	4	4
	Coping curriculum for basic school	2			3			
	Nursing curriculum for basic school					1	1	
	Total	**10**	**4**	**6**	**8**	**4**	**5**	**4**
	Proportion (%)	**0.2**	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**
All		**6 090**	**5 916**	**5 572**	**5 433**	**5 604**	**5 762**	**5 929**

Source: Ministry of Education and Research (2015a), *OECD Review of Policies to Improve the Effectiveness of Resource Use in Schools: Country Background Report for Estonia*, *www.oecd.org/education/schoolresourcesreview.htm*.

Figure 1.12. **Number of students with special educational needs, by type of provision, 2007/08 to 2013/14**



SEN: Special education needs.
Source: Ministry of Education and Research (2015a), *OECD Review of Policies to Improve the Effectiveness of Resource Use in Schools: Country Background Report for Estonia*, *www.oecd.org/education/schoolresourcesreview.htm*.

School governance

Schools benefit from extensive levels of autonomy. As a result, within their schools, school directors are given full responsibility for the quality of education, financial management, appointment and dismissal of teachers, definition of teacher salaries (above a minimum) and relations to the school community and the general public. School directors are appointed and dismissed by the school founder. School directors form their leadership team. An important advisory body in school management within general education is the board of trustees. The board of trustees of a basic school comprises the owner of the school, the teacher council, representatives of parents, graduates and organisations supporting the school, whereby the representatives of parents, graduates and organisations supporting the school make up the majority of the members. If a student council has been formed in a basic school, the board of trustees also includes the representative appointed by the student council (see also Chapter 4).

In vocational educational institutions the Council is the highest collegial decision-making body of the school, organising the activities and planning the development of the school. The Council includes the school director, deputy directors, heads of structural units of the school and employees responsible for broad groups of studies, representative of the student body and a trustee of the employees. The school director manages the work of the Council. In addition, vocational education institutions also have an advisory body, which advises on the connection of the school to the world of

work. The advisory body has at least seven members and is formed by the management of the school for five years. A representative of the advisory body has the right to participate in the sessions of the Council of the school (see also Chapter 4).

Evaluation and assessment

The evaluation and assessment framework in Estonia comprises the following main components in addition to teacher evaluation and school leadership appraisal which are described in Chapters 5 and 4 respectively.

Student assessment

Student performance is assessed by a wide range of instruments, ranging from national external assessments to ongoing daily formative assessment in the classroom. At the national level, sample-based national tests are conducted in Years 3 and 6, the results from which are used for national monitoring. These are low stakes for schools, teachers and students. Summative assessment is based on a mix of teacher-based classroom assessments and national examinations. The latter take place at the end of both basic education and secondary education (Years 9 and 12) and have a certification function (even if, in Year 9, students can continue to Year 10 without passing the examination). In Year 9, students take examinations in mathematics, Estonian language and a third subject which they choose from a given list. Results of these examinations are used by some selective upper secondary schools for admission purposes. In Year 12, students take examinations in mathematics, Estonian language and a foreign language and are required to write a research essay. However, teachers hold most responsibility for summative assessment, e.g. while the Year 9 examination is designed externally, it is marked by teachers at the school. The Ministry of Education and Research defines the framework for summative assessment separately for general education and vocational education while schools and vocational education institutions define summative assessment criteria.

School evaluation

The External Evaluation Department of the Ministry of Education and Research takes responsibility for external school evaluation and the licensing process for schools to operate. There is no cyclical external evaluation of schools. The approach is based on thematic evaluations (e.g. professional development for teachers; individualised support for students) which involve a sample of schools. A risk assessment precedes the choice of the schools in the sample. The focus is on the development of schools and supporting their improvement. County governments carry out the regular thematic evaluations through their education departments. At the end of each school year, the county governor submits a summary report to the Ministry of Education and Research. In addition, the External Evaluation Department can also intervene on the basis of specific complaints. Since 2006 educational institutions must produce an internal evaluation report once during a development plan period, which lasts at least three years. The report should list the strengths and weaknesses of individual schools. There is no mandatory format for the report. Hence, school self-evaluation is promoted by the preparation of the school development plan. Further information is provided in Chapter 4.

Education system evaluation

The Ministry is responsible for evaluating the school system. It uses a range of tools to monitor the performance of the education system. Information on student learning outcomes is collected from sample-based national standardised assessments in Years 3 and 6 and from national examinations in Years 9 and 12. The Innove Foundation undertakes an analysis of these assessments' results, following guidelines prescribed in regulations. In addition, the External Evaluation Department of the Ministry compiles an overview of the findings described in counties' summary reports of their school thematic evaluations. The monitoring system also includes a range of statistics on education based on data collected from schools on a standardised format. These are the basis for annual publications with system-level indicators on education. Also, international benchmarks of student performance provided by international student surveys such as PISA (OECD Programme for International Student Assessment) have been influential in driving policy development at the system level.

Main trends and concerns

Adults enjoy high levels of educational attainment

Levels of educational attainment in Estonia are among the highest within the OECD area, with 90% of 25-64 year-olds having completed at least an upper secondary education, against an OECD average of 75%, and 38% of adults holding a tertiary qualification, compared with an OECD average of 33%. Upper secondary attainment has been rather stable across generations, while tertiary attainment has increased across cohorts: 86% of 25-34 year-olds hold at least an upper secondary education, compared to 88% of 55-64 year-olds (OECD averages: 83% and 64% respectively); 44% of 25-34 year-olds have completed a tertiary education, compared to 36% of 55-64 year-olds (OECD averages: 41% and 25% respectively) (OECD, 2014b).

While upward educational mobility among 55-64 year-olds is comparatively high, it is lower among younger adults. 58% of 55-64 year-olds have a higher educational attainment than their parents, compared to 23% of 25-34 year-olds (42% and 32% on average across OECD countries with available data). Downward educational mobility is more prevalent among the younger cohort. 27% of 25-34 year-olds have a lower educational attainment than their parents (OECD average: 16%), while this is the case for only 8% of 55-64 year-olds (OECD average: 9%). The likelihood of a student (20-34 years-old) in Estonia to participate in tertiary education if at least one of the parents attained tertiary education is 4.7 times as great compared to the likelihood of someone whose parents have not attained at least upper secondary education, which is around the average for OECD countries with available data (OECD, 2014b).

Gender gaps in Estonia are among the widest among OECD countries. 47% of 25-64 year-old women have attained a tertiary education, while only 29% of men have attained this level of education (OECD averages: 35% and 31% respectively). Among 25-34 year-olds, 55% of women have completed a tertiary degree, compared to 33% of men (OECD averages: 46% and 35% respectively) (OECD, 2014b).

Adults have literacy and numeracy skills above the OECD average

The OECD Survey of Adult Skills (PIAAC)[1] shows that Estonian adults (16-65 year-olds) have literacy and numeracy skills significantly above those of participating OECD countries. Estonian adults scored on average 276 points in literacy (ranked 7th out of 23 countries,

against an OECD average of 273 points) and 273 points in numeracy (ranked 11th out of 23 countries, against an OECD average of 269 points). The performance of young adults (16-24 year-olds) was comparatively better with an average of 287 points in literacy (ranked 5th out of 23 countries, against an OECD average of 280 points) and 279 points in numeracy (ranked 7th out of 23 countries, against an OECD average of 271 points). By contrast, the proportion of adults scoring at the two highest levels in problem solving in technology-rich environments (28%) was significantly below the OECD average (34%) (OECD, 2013a).

The proportion of low-skilled adults (Score Level 1 and below) is relatively small at 13.0% in literacy (against an OECD average of 15.5%) and 14.3% in numeracy (against an OECD average of 19.0%) (OECD, 2013a). Estonia is also the OECD participating country with the lowest difference in literacy proficiency between adults with high- and low-educated parents. However, low-skilled adults are about four times less likely to participate in adult education and learning than highly-skilled adults (OECD, 2013a).

Participation in schooling is almost universal, and rates of year repetition and school transfer are low

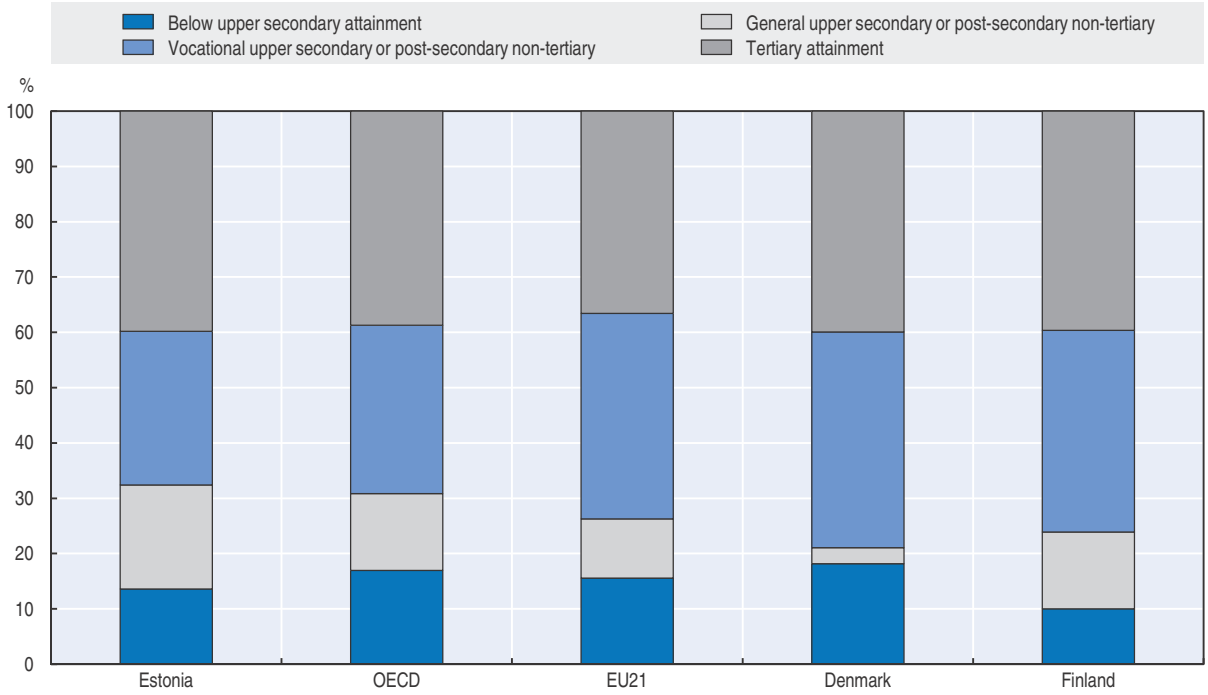
School access in Estonia is almost universal. The enrolment rate for 5-14 year-olds is 95% (against an OECD average of 98%), and 86% for 15-19 year-olds (against an OECD average of 83%). Estonia has made progress in reducing early school leaving, as the share of 18-24 year-olds who left the education system with at most a lower secondary qualification declined from 13.5% in 2009 to 11.4% in 2014 (while it remains at 15.3% for males), slightly above the 2014 EU average of 11.1% (Eurostat data).[2] Adults' (25-64 year-olds) participation in formal and non-formal education is around the OECD average (53%, compared to an OECD average of 51%) (OECD, 2014b).

According to school principals' reports, based on PISA 2012 data, about one in two 15 year-olds are in a school that always considers residence in a particular area for admission (OECD average: 41%). More than one in three 15 year-olds are in an academically selective school whose principal reported that at least students' records of academic performance or recommendations of feeder schools is always considered for admission (OECD average: 43%). Year repetition in Estonia is very low. Only 3.5% of 15 year-olds participating in PISA 2012 reported having repeated a Year in primary, lower secondary or upper secondary school (against an average of 12% in OECD countries). 15-year-old students in Estonia are also not likely to be transferred to another school because of low academic achievement, behavioural problems or special learning needs. Only 4% of 15 year-olds were in a school whose principal reported such a practice for PISA 2012 (against an OECD average of 13%) (OECD, 2013b).

A significant proportion of young adults do not have a professional or vocational qualification and rates of completion in vocational upper secondary education are low

In Estonia, as analysed in OECD (2015), about 30% of young people do not have a professional or vocational qualification which prepares for labour market entry. Relatively many young people obtain upper secondary academic degrees, which do not prepare for immediate labour market entry, and do not pursue studies at the tertiary level. The share of young people whose highest educational attainment is a general upper secondary degree is large compared to other countries (see Figure 1.13). At the same time, enrolment rates in upper secondary vocational education in Estonia are comparatively low (34%, compared to 46% on average across OECD countries) (OECD, 2014b).

Figure 1.13. **Highest educational attainment of young adults (25-34 year-olds), 2012**



Note: EU21 average is the unweighted mean for the 21 countries that are members of both the European Union and the OECD and for which the data are available or can be estimated.
Source: OECD (2014b), *Education at a Glance 2014: OECD Indicators*, *http://dx.doi.org/10.1787/eag-2014-en*, Tables A1.4a and A1.5b.

A related major challenge concerns the low completion rates in vocational upper secondary education. In 2012, in Estonia, only 60% of entrants in a vocational programme at the upper secondary level graduated (from either a general or vocational programme) within the theoretical duration of the programme, against an OECD average of 64%. This proportion increases to 66% for a completion within two years after the theoretical duration of the programme (against an OECD average of 79%). The corresponding figures for graduation (from either a general or vocational programme) for students who entered a general upper secondary programme are 84% and 91% (against OECD averages of 76% and 91%) (OECD, 2014b, Table A2.4).

Estonian students perform above the OECD average at the secondary level in mathematics, reading and science

In PISA 2012, Estonian students scored on average 521 points in mathematics, 516 points in reading and 541 points in science, compared to OECD averages of 494, 496 and 501 points respectively. Estonia's performance in PISA is not only above the OECD average, but has also improved significantly since it first participated in 2006. The country's performance in reading improved from 501 points in PISA 2006 to 516 points in PISA 2012, and science performance improved from 531 points in PISA 2006 to 541 points in PISA 2012 (OECD, 2014c).

While 15 year-olds in Estonia do very well in international assessments, the percentage of students who feel happy at school, however, is one of the lowest among OECD countries. Only 67% of students reported feeling happy at school, compared to 80% on average across OECD countries. And only 36% of students reported that things are ideal in their school (against an OECD average of 61%) (OECD, 2014c).

Estonia has a slightly higher than average share of top performers in mathematics and science, and one of the smallest shares of low performers in mathematics, reading and science

In PISA 2012, 14.6% of students performed at proficiency level 5 or above, in mathematics, meaning that they can develop and work with models for complex situations, and work strategically using broad, well-developed thinking and reasoning skills (against the OECD average of 12.6%). This is a three percentage point increase from PISA 2009. Also, 8.4% of students performed at proficiency level 5 or above in reading (OECD average: 8.4%), and 12.8% in science (OECD average: 8.3%), and Estonia also saw an increase in top performers in these two subjects (by around two percentage points since PISA 2009) (OECD, 2014c).

Only 11% of Estonian 15 year-olds demonstrated low levels of mathematics proficiency, meaning that they can, at best, extract relevant information from a single source and can use basic algorithms, formulae, procedures or conventions to solve problems involving whole numbers. This proportion is notably below the OECD average that performed below proficiency level 2 (23%). In reading and science, similarly only a small percentage of Estonian 15 year-olds performed below this proficiency level (9% in reading and 5% in science) and the share of low performers equally decreased from PISA 2009 to PISA 2012 (a reduction of four percentage points in reading, and of three percentage points in science) (OECD, 2014c).

The dispersion of scores is small with the score difference in mathematics between the top and bottom 10% of students being the second smallest among OECD countries (209 points compared to an OECD average of 239 points). In reading, the score difference between the top and the bottom 10% of students amounts to 206 score points, also among the smallest among OECD countries (average of 241), and in science to 206 points (OECD average: 239 points) (OECD, 2014c).

Students' socio-economic background has a smaller impact on performance in Estonia than in other OECD countries

In Estonia, only 9% of differences in performance in mathematics among students in PISA 2012 are explained by disparities in students' socio-economic status, compared to an OECD average of 15%. While, on average across OECD countries, 90 score points – the equivalent of more than two years of formal schooling – separate the mathematics performance of advantaged students (the top quarter of socio-economic status) and disadvantaged students (the bottom quarter of socio-economic status), this difference amounts to 63 score points in Estonia. Whereas disadvantaged students are, on average across the OECD area, more than twice as likely as students who are not considered disadvantaged to score in the bottom quarter of the performance distribution, disadvantaged students in Estonia are only about 1.6 times as likely to score in the bottom quarter of the performance distribution. Fewer than 10% of students in Estonia attend disadvantaged, low-performing schools (OECD average: 18%), while fewer than 15% attend advantaged, high-performing schools (OECD average: 20%). In addition, a relatively large share of students in Estonia beat the socio-economic odds against them when compared with similar students in other countries. Estonia, then, combines relatively high performance with a relatively weak relationship between performance and socio-economic status, and has relatively narrow performance differences across socio-economic groups (OECD, 2013c).

Differences in performance between schools are comparatively small, but the performance of students in Russian language schools is a concern

Between schools variance in Estonia accounts for 13.3% of the average total variation in mathematics performance across OECD countries (OECD average: 36.9%). As Estonia manages to achieve higher-than-average mean performance, parents and students can expect that, no matter what school they attend, they are likely to achieve at high levels (OECD, 2013c).

However, even though there has been a notable improvement over the six years prior to PISA 2012, students in Russian-language schools scored lower than those in Estonian-language schools in PISA 2012 in all assessment subjects. In PISA 2012, the difference between the scores of Estonian- and Russian-language students in mathematics amounted to 31 points (PISA 2006: 40 points), and in reading and science to 36 points (PISA 2006: 66 points and 43 points respectively) (Ministry of Education and Research, 2015a).

Some performance differences in Estonia exist between schools depending on their location

After taking socio-economic status into account, schools in cities score better in the PISA 2012 mathematics assessment than schools in small towns by a difference of 8 score points (OECD average: 4 score points). As in other countries, students in schools located both in cities and in small towns perform better than students in schools located in rural areas, but this performance difference disappears after considering socio-economic status. Interestingly, the mathematics performance of students attending a rural school in Estonia is one of the highest among OECD countries after accounting for socio-economic status (517 score points, compared to an OECD average of 479 score points) (OECD, 2013c).

Notes

1. The Survey of Adult Skills (PIAAC), which took place from August 2011 to March 2012, assesses the proficiency of adults aged 16-65 in literacy, numeracy and problem solving in technology-rich environments. Around 166 000 adults were surveyed in 24 countries and sub-national regions, including 22 OECD member countries. Further information is available at *www.oecd.org/site/piaac*.
2. See Anspal et al. (2011) for an estimate of the cost of not completing upper secondary education in Estonia.

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Chapter 2

Governance of schooling and the organisation of the school network in Estonia

This chapter is about the governance of schooling, in particular the supply of school services and the organisation of the school network. The chapter places particular emphasis on areas of priority for Estonia such as the restructuring of the school network in light of demographic developments, better integrating students with special needs, improving the language support to Russian-speaking students and increasing efficiency in vocational education. It also reviews capacity and co-operation at the local level for education provision as well as co-ordination for educational regional planning. The chapter further highlights the importance of increasing the externality of quality assurance processes and the need to review the regulation of the private school sector.

The statistical data for Israel are supplied by and under the responsibility of the relevant Israeli authorities. The use of such data by the OECD is without prejudice to the status of the Golan Heights, East Jerusalem and Israeli settlements in the West Bank under the terms of international law.

This chapter is about the governance of schooling, in particular the supply of school services and the organisation of the school network. It analyses how the effectiveness of resource use is influenced by key features of the school system such as the distribution of responsibilities, the structure of schooling, diversity of school offerings, learning opportunities across geographical areas and student groups and the level of parental choice. The chapter places particular emphasis on areas of priority for Estonia such as the restructuring of the school network in light of demographic developments, increasing efficiency in vocational education and training, better integrating students with special needs and improving the language support for Russian-speaking students.

Context and features

The governance of education in Estonia is facing similar challenges than in most other OECD countries. First, the education sector operates under various external pressures, such as the rising importance of education in a global world; the growing imperative of an efficient use of public resources; rising expectations from society; technological advancements; and demographic changes, which are leading to the decrease of the school age population. Second, education has become highly decentralised with the devolution of significant responsibilities to municipalities, often of very small size, and the granting of high levels of autonomy to individual schools. The education system involves the interaction of various actors, each with own specific interests and agendas, which leads to a great level of administrative complexity.

The governance of schooling is affected by a context of funding constraints and demographic decline

In 2011, Estonia spent about 3.8% of its GDP in pre-tertiary education (including pre-primary education), against an OECD average of 4.2%. Overall public expenditure on education as a percentage of GDP decreased from about 6.0% in 2009 to about 5.2% in 2011 (while the OECD average decreased from 5.8% to 5.6%, in the same period) (OECD, 2014a, see also Chapter 3). In addition, teachers in Estonia, in spite of the significant salary increases of recent years, are among the worst paid in the OECD area, particularly pre-primary education teachers (see Chapter 5). The efficient use of resources is a growing concern also as a result of the fiscal constraints imposed by the financial crisis, especially during 2008/09. As a result, it has become a necessity for policy makers to demonstrate that public funds are spent effectively and that the public purposes for financing education are actually fulfilled.

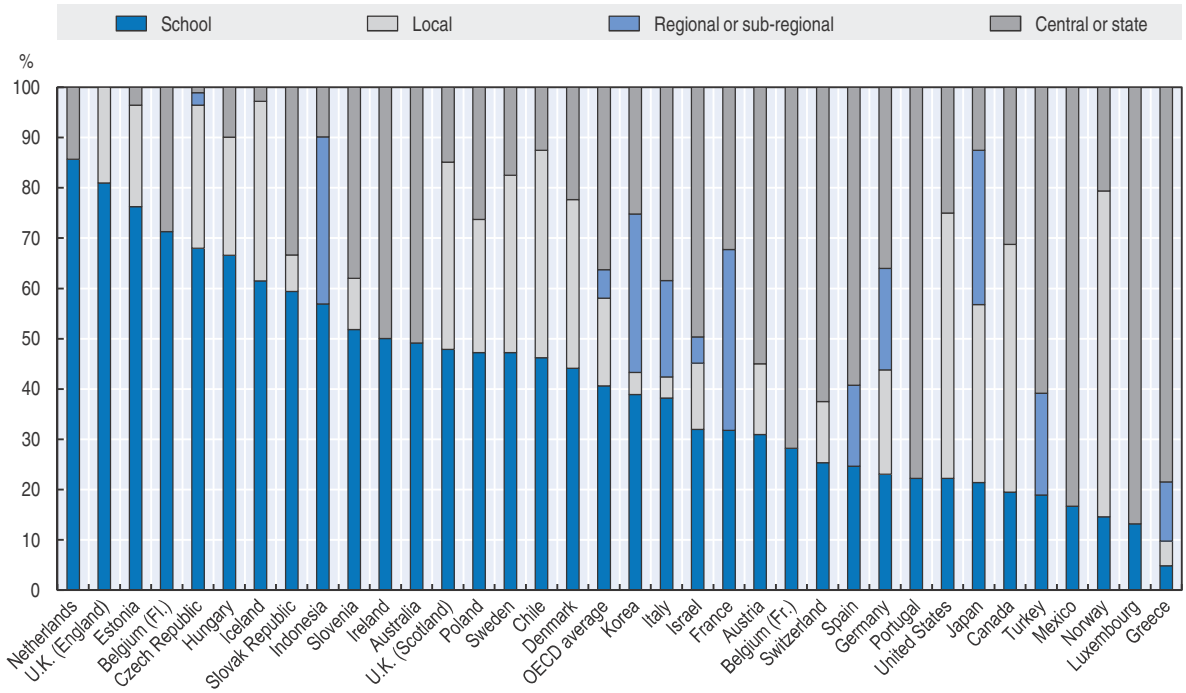
At the same time, as described in Chapter 1, there is a pronounced demographic decline which will be sustained in the long term. By the 2013/14 school year, as compared to 2005/06, the number of students in general education had dropped by 22% and the number of general education schools decreased by 9% (see Tables 1.4 and 1.5 in Chapter 1). Furthermore, the drop in the number of students varies across regions. Since 2005, the biggest reduction in the number of students in general education occurred in Hiiu County

(46.1%) followed by Jõgeva County (39.4%) and Võru County (39.1%), and the smallest reduction occurred in Harju County (9.8%) and Tartu County (14.7%), where the two largest Estonian cities are located (Ministry of Education and Research, 2015a).

The governance of schooling is highly decentralised

The current distribution of decision-making power in the Estonian school system involves the three poles of the national, the municipal and the institutional. Compared to other OECD countries, the governance of schooling is highly decentralised (see Figure 2.1). The institutions (schools) have acquired relatively large autonomy: school directors hire and dismiss staff; manage the school budget; can adapt the national curriculum to their context, and are protected from a too strong local control through the funding system (which limits the redistributing power of municipalities) (see also Chapters 3 and 4). Also, each county government, which represents the national government in the respective county territory, has an education department with some limited powers such as the supervision of education services (through its inspection services), the provision of information on education regulations and, if welcome by the municipalities, a co-ordination role for the provision of education services in the county.

Figure 2.1. **Percentage of decisions taken at each level of government in public lower secondary education, 2011**



Source: OECD (2012a), *Education at a Glance 2012: OECD Indicators*, *http://dx.doi.org/10.1787/eag-2012-en*, Chart D6.1.

The national government, that is, the Ministry of Education and Research has strong regulatory powers as well as powerful instruments to implement and monitor its policies through the funding of primary and secondary education, a thorough information system which generates large amounts of data on local and school level processes (including student outcomes), inspection services that allow the collection of qualitative classroom level information, the definition of student learning objectives, the licensing of education

providers, and through a number of specialised agencies such as the Estonian Qualifications Authority and the Innove Foundation. The state, through the Ministry of Education and Research, is also an education service provider. In 2013/14, it managed 30 general education schools (about 3% of all general education students) and 29 vocational education schools (about 82% of all vocational upper secondary education students) (see Chapter 1).

At the same time, municipalities are influential players as providers of public services, with strong national level representation and interest assertion capacities. In education, they manage all public provision of pre-primary education (with about 96% of the number of students at this level), most general education provision (92% of all students at this level) and 3 vocational education schools (16% of all vocational upper secondary education students) (see Chapter 1). Interestingly, there is a degree of competition between the state and municipalities in the provision of general and vocational education, which is more visible at the upper secondary level. Municipalities take responsibility for the quality of their education services, including planning of services, provision of support to schools (e.g. support staff, specialised staff, career counselling, lunches, extracurricular activities, medical services), quality assurance, maintenance and development of infrastructure, and management of human resources (in particular the organisation of school leadership). Of course, the extent to which municipalities exercise these functions depends on their size and capacity. Large municipalities such as Tallinn or Tartu have education departments with good capacity, including for quality assurance and human resources management. However, smaller municipalities rely heavily on school directors to assume most of these functions. School directors are responsible for all core educational functions and organisational operation of schools. They have strong authority over the use of funding and employment decisions and have discretion to define salary levels above the minimum teacher salary (see Chapters 4 and 5).

Hence, key characteristics of the Estonian governance of schooling are: strong fiscal decentralisation, decentralised provision of education services, local human resource management and relatively light central professional accountability systems combined with a curricular policy that leaves room for the establishment of school-level curricula. The multi-level and multi-actor character of the Estonian school system has created a particularly complex governance context that requires intelligent and sophisticated steering and policy implementation approaches. Unlike in some other countries, the decentralisation process in Estonia has not led to the weakening of national authorities: it has rather changed their role and repertoire of instruments for effective steering.

School choice is a foundation of the school system

There is a great degree of school choice in the Estonian school system. Private schools are publicly funded on the same terms as public schools (while they can also charge tuition fees). A child is originally assigned to a school on the basis of his or her residence while taking into account the school of enrolment of siblings. Schools are required to admit all Year 1 students assigned to them on this basis with no entrance tests. However, parents may choose another school for their children subject to the availability of places. Also, upper secondary schools define their entrance criteria and admission procedures, which need to be published. They typically administer admission tests.

The consolidation of the school network has become a policy priority

The school network is defined in Estonia as the totality of schools formally licensed by the government to provide education and care in the country. Only schools belonging to the network are entitled to receive public funding. In order to be registered as part of the school network, schools need to go through a licensing process regulated by the Ministry of Education and Research. The Estonian school network is regulated by the Basic Schools and Upper Secondary Schools Act, the Vocational Education Institutions Act and the Private Schools Act for general education, vocational education and private education respectively.

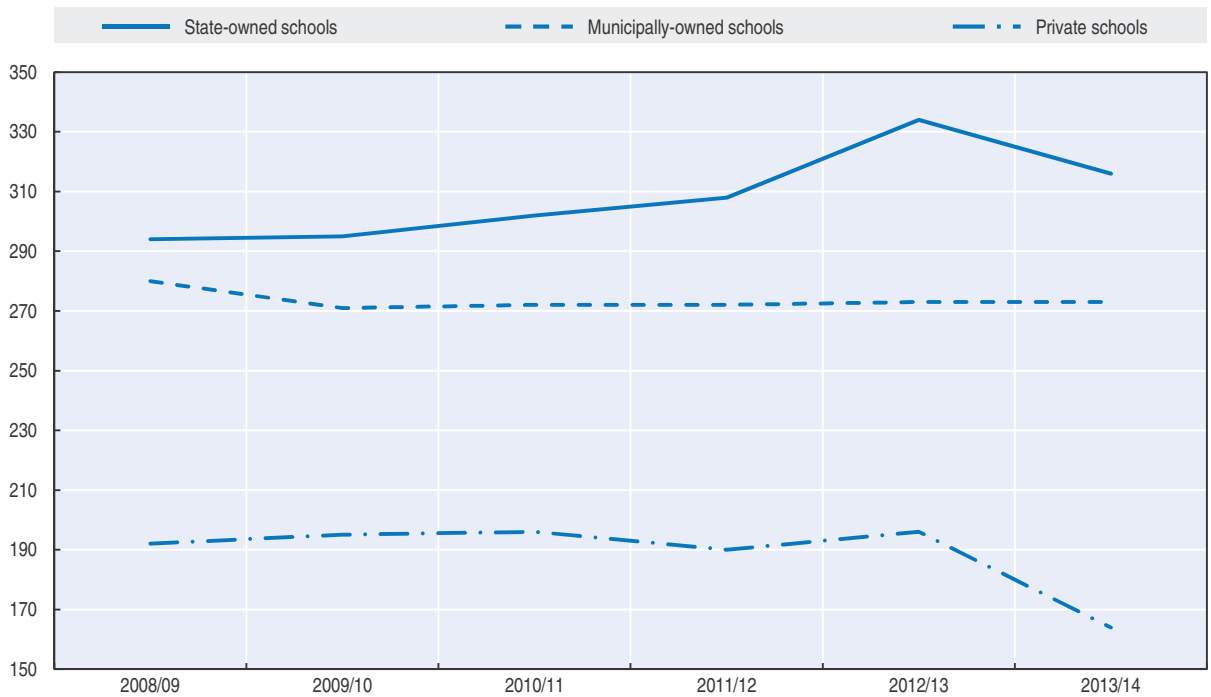
The licensing process to open a school is similar across owner types. While the decision to open a school is taken by the respective owner, the license is granted by the Ministry of Education and Research (including for municipal schools). The licensing process involves, for all owner types, the submission of a set of documents which are then analysed by the Ministry and an ad hoc expert committee. Applications must include the statutes of the school; the curriculum proposed; evidence of the qualifications of school management and teachers; information about facilities; the development plan (for private schools only); certification that school owner and individuals on management bodies comply with the Law (for private schools only); for vocational schools, a foundation for the choice of programmes as well as written views of social partners on the programmes proposed; and the opinion of the county Governor (for municipal schools only). The analysis of the ad hoc expert committee, mandated by the Minister, concentrates on the analysis of the curriculum and the conditions for its delivery. The license is initially granted for five years and can be then renewed for an unspecified term in case the delivery of education services is considered to meet the stipulated requirements.

School closure is a decision by the respective owner, i.e. the municipality in case of a municipal school, the Ministry of Education and Research in case of a state school and a private entity in case of a private school. A number of aspects are considered when closing a school such as the quality of the education it provides, the cost of provision, safety and health conditions, school alternatives in the vicinity, quality of roads around school location and the school's role in the local community and cultural life. As described below, given the demographic decline, a growing number of schools, particularly in rural areas, have too few students, small classes and underutilised facilities. When a decision is made to close a school, there is typically support (including financial support) to ensure an adequate transition for its current students. This involves the transfer of students to the nearest school (transport expenses as well as longer time spent on travelling), defining new uses for the school building(s) and support for redundant teachers (Ministry of Education and Research, 2015a).

From 2005 to 2013, 78 general education municipal schools were closed, with primary schools representing by far the largest share of closed schools (Ministry of Education and Research, 2015a). In addition to that, also due to the small number of students, several schools experienced a transformation of their offerings e.g. from full-cycle school to basic school, basic school to primary school, and so on (see Table 1.7); and other schools within the same municipality were merged (31 between 2005 and 2013) (Ministry of Education and Research, 2015a).

Figure 2.2 displays average school size in general education by type of ownership in the last few years. It shows the recent decrease in school size, with the exception of state institutions up to 2012/13. While in 2008/09, the average school size was 275, it stood at 265 in 2013/14 (Ministry of Education and Research, 2015a). It also highlights the fact that privately-owned schools are considerably smaller and witnessed a recent pronounced drop in their size. The bigger size of state-owned schools is explained by the fact that these are mostly upper secondary schools.

Figure 2.2. **Average number of students per school, by type of ownership, general education, 2008/09 to 2013/14**

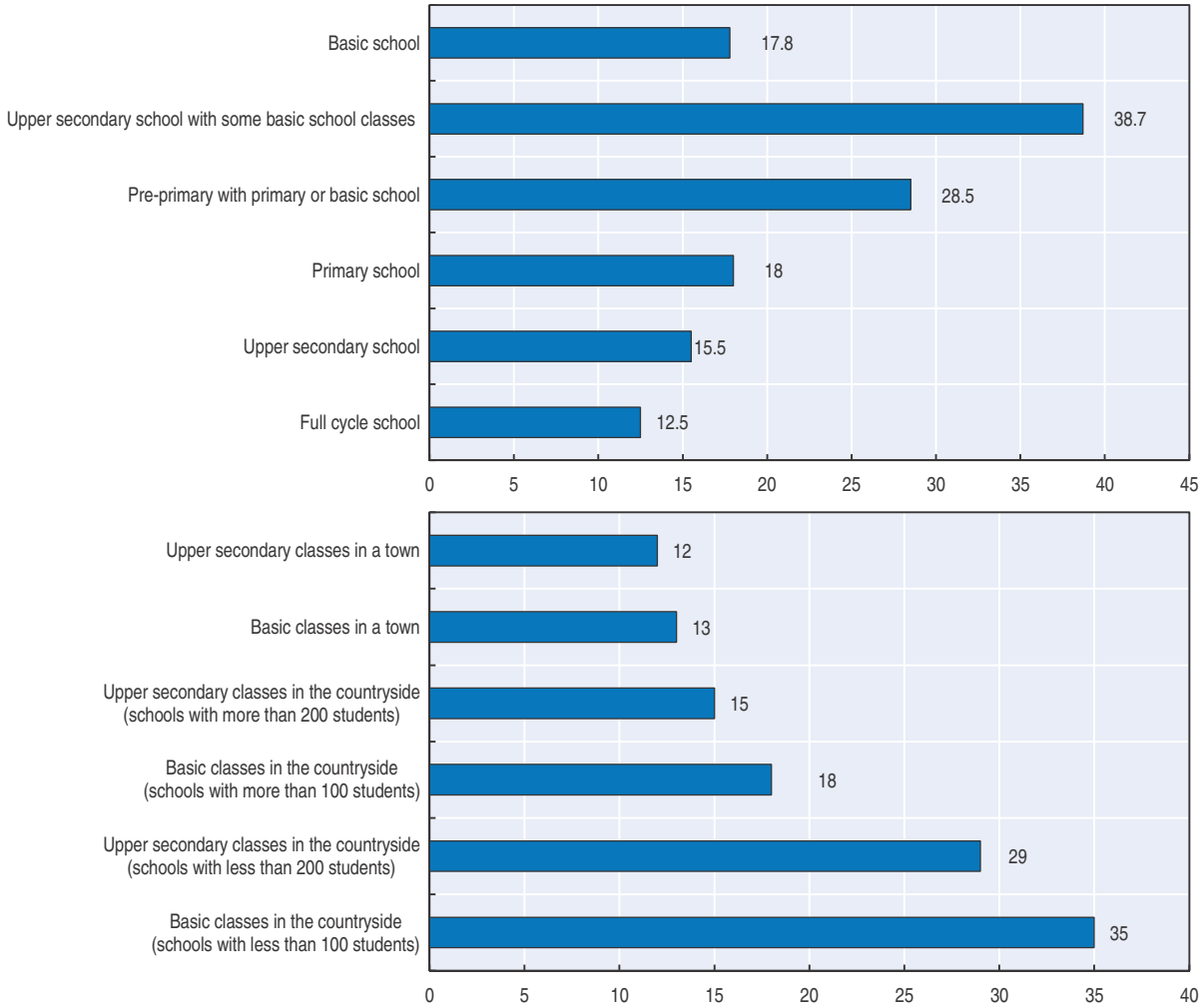


Source: Reproduced from Ministry of Education and Research (2015a), *OECD Review of Policies to Improve the Effectiveness of Resource Use in Schools: Country Background Report for Estonia*, *www.oecd.org/education/schoolresourcesreview.htm*.

In turn, Figure 2.3 provides information on the average use of space (net area per student) in general education by type of school and school setting. The average net area per student in schools considers the areas used for instruction and supporting activities as well as sports facilities, boarding school facilities and ancillary buildings. It shows that there are considerable differences between urban and rural areas (with lower net areas in urban areas) and between basic schools, schools with upper secondary education and full-cycle schools. The overall average net area per student in the country is 15 m^2 (Ministry of Education and Research, 2015a). A long-term goal for the use of space, excluding sports facilities, boarding school facilities and ancillary buildings, in general education schools is to achieve the figure of 10 m^2 per student by 2020. Currently, less than a third of general education schools comply with this objective.

Further evidence for the need to rationalise the school network is provided by current average class sizes. In 2012, class size in Estonia stood at 17 for primary education (2nd lowest figure in OECD area, against an OECD average of 21) and at 16 for general lower secondary education (lowest figure among OECD countries, against an OECD average of 24)

Figure 2.3. **Average net area per student (m^2), by school type and setting, general education, 2013/14**



Notes: A basic school provides primary and lower secondary education (Year 1 to Year 9); a general upper secondary school offers Year 10 to Year 12 (*Gymnasium*); a full cycle school offers primary, lower secondary and upper secondary education (Year 1 to Year 12); a primary school offers Year 1 to Year 6. Upper secondary classes refer to classes at the upper secondary level either in full cycle schools or *gymnasiums*. Basic classes refer to classes at the basic education level in any type of school (e.g. primary, full cycle).
Source: Reproduced from Ministry of Education and Research (2015a), *OECD Review of Policies to Improve the Effectiveness of Resource Use in Schools: Country Background Report for Estonia*, *www.oecd.org/education/schoolresourcesreview.htm*.

(OECD, 2014a). The need for rationalisation is clear and seems to be accepted by all key stakeholder groups. There are too many and too small founder units which lead to a fragmentation of the system (see Table 3.8, in Chapter 3). In the past decade, incentives for school consolidation provided by the funding system led only to partial results at the municipal level (see Chapter 3). This has led to the belief, among the government, analysts and various stakeholders that the central government should be more prescriptive in the process of school network rationalisation. The current school network policy of the government has three interconnected major elements:

- The separation of basic and general upper secondary education, and the rationalisation of the separate general upper secondary school network.

- The "recentralisation" of general upper secondary education, with state operation of general upper secondary schools (involving the establishment of one state general upper secondary education school per county), the reduction of the number of general education schools operated by municipalities which offer upper secondary education and the decrease of the overall number of schools providing upper secondary education to a figure under 100 by 2023 (this process will be referred to as the "recentralisation" of general upper secondary education in this report).
- Incentives for municipalities to rationalise their upper secondary and basic education school networks.

Another issue concerns the growing number of private schools (see Chapter 1). The emerging network of private schools, receiving the same funding as public schools, increases educational capacity mainly in bigger cities but, most often, with smaller classes than in public schools, when the government intends to ensure greater efficiency of school provision. Indeed, in 2012, the average class size in the private sector was 15 and 12 for primary and lower secondary education respectively, while it stood at 17 and 16 for the whole system for the same education levels (OECD, 2014a).

Vocational education is undergoing considerable transformations

The provision of vocational education and training (VET) in Estonia has a number of specific features. It is mostly provided in state-owned and state-managed schools. Funding is based on comprehensive planning by the State Commission for Vocational Education. The commission defines the occupational profiles to be offered in the VET system and annually determines the exact number of students to be publicly financed for each of the occupations (state-commissioned places) at each vocational school. It does so in dialogue with employers and vocational secondary schools. Schools typically plan their occupational profiles in three-year cycles with the involvement of major stakeholders (who are represented in school management structures, see Chapter 1) and are allowed to enrol additional students on a fee-paying basis. The number of students in vocational education has decreased 22% between 2007/08 and 2013/14, in part as the result of the overall demographic decline. However, the share of VET students among upper secondary students remains somewhat low at 30% (average between 2005 and 2011). This is in part due to the low status of vocational education among secondary students.

Vocational education and training in Estonia remains mostly school-based and provides few opportunities for students to directly interact with the business world. In part this is due to the small size of Estonian companies; in part it is due to the relatively weak culture of co-operation between companies and training institutions. Within this context, VET policies in Estonia currently have three major objectives: i) the continuation of the rationalisation of the vocational school network; ii) attracting more students to the vocational stream of upper secondary education; and iii) the improvement of the effectiveness of VET programmes, through the improvement of linkages to the labour market. A major recent development was the establishment of a new standard for vocational education, as of 2013 (see Chapter 1). The new occupational standards are harmonised with the Estonian Qualifications Framework.

Education services for students with special educational needs are receiving new attention

In 2014/15, there were 38 schools for children with special educational needs (SEN schools), 20 of which were run by the state, 13 by municipalities and 5 by a private entity. In 2013/14, about 3 300 students attended SEN schools while another 2 500 students with special needs attended mainstream schools (see Table 1.9 in Chapter 1).

Since 2007, the total number of special needs students has remained stable, but the number attending mainstream schools has increased by about 600 while the number attending SEN schools has decreased by about 600. This shift of enrolment from SEN schools to mainstream schools is nonetheless slower than the Ministry envisaged given the current objective of mainstreaming as many special needs students as possible (Ministry of Education and Research, 2015a). Indeed, less than 20% of the special needs students attending mainstream schools are being taught in regular classes.

Until recently, the decision to send a child to a SEN school was made by the parents after consulting with the school. Recently, this procedure has been changed and while parents will still have the choice, the decision will be made in consultation with specialists at the new regional counselling centres established by the Ministry (see Chapter 1). The new centres (also called "Pathfinder centres") will provide services to students, parents, teachers and schools to support children with special educational needs. This might include the provision of speech therapists, special education teachers, social pedagogues and psychologists (see Chapter 1). This initiative is based on a new SEN inclusion strategy the Ministry of Education and Research is developing. However, it should be noted that special needs education, as such, is not part of the Estonian Lifelong Learning Strategy 2020.

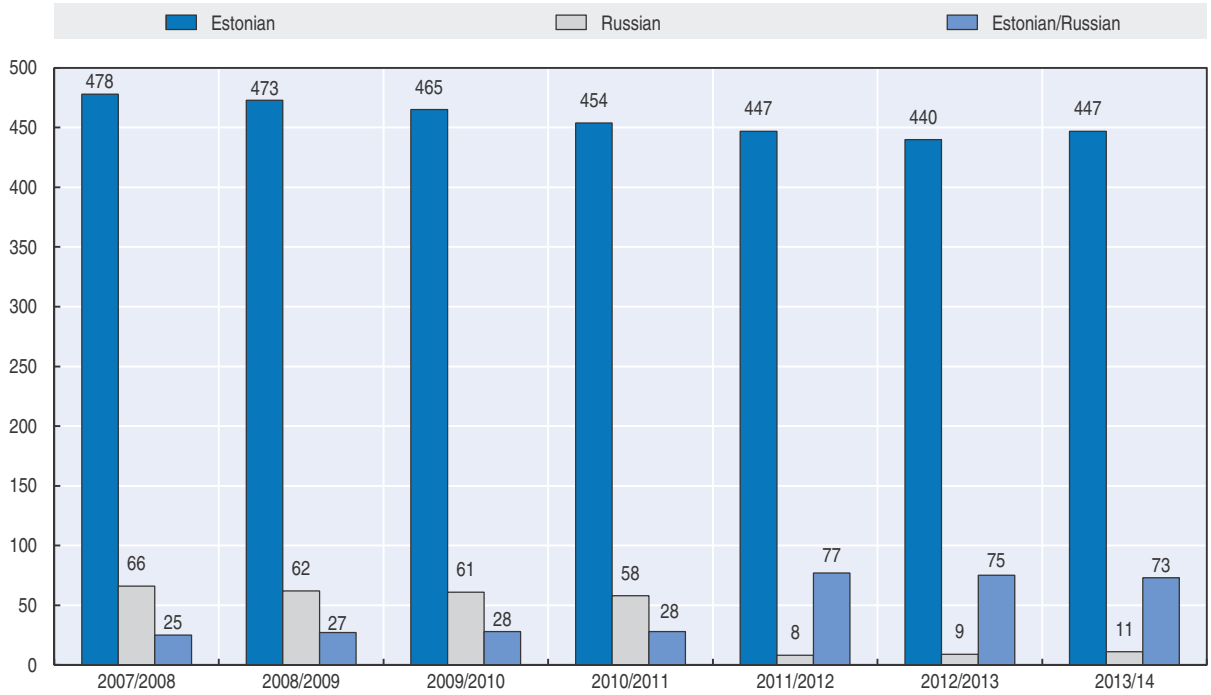
Instruction for Russian-speaking students is a key education policy area

As explained in Chapter 1, until new regulations for general upper secondary education were adopted in 2007 (and implemented mostly in 2011), the ruling pattern of educational provision for Russian-speaking students was the operation of "Russian schools" with full mother tongue instruction and teaching Estonian as a foreign language at all levels of pre-tertiary general education. This has been complemented with schools offering the Estonian Language Immersion Programme, whereby instruction is both in Estonian and Russian (see Chapter 1). Figures 1.10 and 1.11 in Chapter 1 display the distribution of students across the language of instruction in Estonian schools.

In general upper secondary education from the 2011/12 school year, a rather radical shift from Russian language instruction to bilingual education was made. In the new system, the language of instruction gradually became Estonian for 60% of the content while Russian became the language of instruction for the remaining 40%. The transition began in 2007, thus giving schools time to prepare. At upper secondary level full Russian-language programmes remained available only in vocational education and training (Estonia.eu, 2013). Figure 2.4 displays the number of general education schools by language of instruction (including basic schools).

The aim of these policies and programmes is to ensure equal opportunities for Russian-speaking students to access tertiary education (where instruction in Russian is not offered), the labour market and society as a whole. Indeed, majority-language proficiency is a key condition for Russian-speaking students to succeed in school.

Figure 2.4. **Number of general education institutions by Estonian or Russian language of instruction, 2007/08 to 2013/14**



Notes: Data based on what schools declare in their charters. The language of instruction is considered Estonian (Russian) if at least 60% of the subjects are taught in Estonian (Russian). A school with the Language Immersion programme and offering general upper secondary with 60% of the subjects in Estonian is considered to have "Estonian" as a language of instruction (if all other years are taught in Estonian). A school is considered to have "Russian" as a language of instruction only if it is a basic school where subjects are taught in Russian. A school is considered to have "Estonian/Russian" as a language of instruction if: i) basic education is offered in Russian and general upper secondary education is offered at least 60% in Estonian; ii) Some basic education years are taught in Russian and some in the context of the Language Immersion programme; and iii) same as ii) and general upper secondary education is offered at least 60% in Estonian.
Source: Estonian Education Information System (*Eesti Hariduse InfoSüsteem*), *www.ehis.ee*.

Strengths

The Estonian school system is high-performing and promotes equity

The Estonian school system is among the best performing school systems in Europe, with learning outcomes and participation indicators which are high in international comparison. Coverage rates in pre-primary education are high, participation in schooling is almost universal and rates of repetition are low (see Chapter 1). According to PISA, Estonian students perform well above the OECD average at the secondary level in mathematics, reading and science. Furthermore, Estonia has one of the smallest shares of low performers in these three areas while having a slightly higher than average share of top performers (see Chapter 1).

Estonia has also a good record in promoting equity in schools. The capacity of Estonian schools to compensate for the negative impact of low socio-economic status on learning is high in international comparison. According to PISA, students' socio-economic background has a smaller impact on performance in Estonia than in other OECD countries (see Chapter 1). There has also been improvement in what constitutes one of the major equity concerns: the performance gap between Estonian-speaking and Russian-speaking students. According to PISA results, the performance gap in mathematics between 15-year-old students whose home language is Estonian and those whose home language is Russian was

33 points in 2006. In 2012 this gap decreased to 17 points. Recent policies of strengthening curricular flexibility and the more flexible use of human resources in schools are aiming at creating more space for responding to the diverse individual needs of students. These changes have the potential of further improving the overall capacity of schools to compensate for the disadvantages of various student groups.

Overall, among policy-makers and stakeholders, there is a clear understanding and appreciation of the importance of education and an associated desire to deliver improvement. During the review visit it was clear that, across actors, Estonia recognises the strategic importance of education for the future wellbeing and prosperity of individual citizens and of the nation as a whole.

The governance of the school system benefits from clear strategic objectives and education policy development is well informed

There is a stable institutional framework for the education system with clear strategic objectives which work as a reference for the development of policies. These are open to the contribution of a variety of stakeholders and seek to be informed by the available evidence. The relatively strong local and institutional power and the market mechanisms are counterbalanced by national level steering and the use of a number of steering instruments. Estonia has a highly developed national education information system which allows the monitoring of many local and institutional level processes (such as student performance, funding and human resource management) and creates also good opportunities to assess the impact of national policies and development interventions. The funding system is also used to create incentives to influence the behaviour of local actors (see Chapter 3). The per student funding is, to some extent, encouraging municipalities to use funds in a more efficient way, and to seek solutions of reorganisation or restructuring services when the number of enrolled students is falling (see Chapter 3).

The balance of power between the state, municipalities and schools is complemented by two interrelated mechanisms that strengthen the system of checks and balances: the relative strength of market mechanisms, on the one hand, and the actions leading to increased transparency, on the other. The existence of private institutions and their access to public funding and, even more, the per capita funding system based on the principle of public money following students associated with free school choice have created a quasi-market environment which places the users of services in a powerful position. This is supported by the disclosure of some information about schools for parents and students with the intention of making school choice more informed and encouraging competition among institutions. A public Internet portal named "The Eye of Education" (*Haridussilm*, *www.haridussilm.ee*) which was established by the Ministry of Education and Research publishes key data on every school, based on the Estonian Education Information System (*Eesti Hariduse InfoSüsteem*, *www.ehis.ee*).

There has been a good investment in infrastructure that facilitates system learning and adjustment

Both the national government and local governments have invested in the sort of hard and soft network infrastructure that facilitates system learning and adjustment. At the local level, this includes investments in electronic accounting systems, hobby schools, the improvement of subject teaching, and the exchange of information between school directors. At the national level, this refers to the development of sophisticated central

databases to track public funding, monitor the performance of public institutions and follow the life chances of citizens. The national government has also used European Union structural and investment funds to support the development of a network of private and university-based research centres whose work does seem to be taken seriously in policy discussions. And it is investing heavily in a network of regional centres for career counselling and guidance, support for special needs education, and psychological counselling.

Municipalities have made effective and prudent use of their borrowing powers to refurbish schools and build new facilities. Jurisdictions that reached their debt limits under Estonian law have also made use of innovative public-private partnerships in which private firms build or renovate schools and then lease them back to municipal governments. Also, municipalities have made effective and creative use of centralised procurement systems to engage the private sector in the provision of support services to schools while preserving school choice with respect to the type of services being provided.

Local governance of education brings benefits and is balanced with good levels of horizontal accountability

Municipalities and individual schools carry a significant degree of autonomy – they can take a range of decisions at local and school level in order to deliver improvement. This is an important strength and can help ensure that schooling contributes to the wider social and economic wellbeing of communities, families and individuals. The analysis of the education policy practice of the most effective education systems suggests that the combination of extended local and school autonomy with strong accountability mechanisms, continuous capacity building and the use of effective system steering instruments offers the highest chances to create a high performant education system (Mourshed et al., 2010).

Estonia has managed to build a system with a relatively good balance between accountability and autonomy. The move towards extended local and school autonomy has been paralleled with a high level of horizontal accountability ensuring the intensive involvement of parents, local communities and various other stakeholders. Horizontal social control over public sector behaviour seems fairly well developed in Estonia at the school level. This is done through participatory boards of trustees in general education schools and advisory bodies in vocational schools. These ensure that quality of education, school development plans, human resource management, budgets and expenditures are continuously reviewed by different stakeholders (see also Chapter 4). Through its meetings with local municipal leaders and with board of trustees' members, the review team formed the impression that a genuine commitment to the goals of assuring quality and effectiveness in Estonia is a realistic expectation at local and institutional level.

The school network provides a wide diversity of offerings but the need for its consolidation is recognised

Estonia operates an extensive school network able to ensure full access to education. Especially, there is a strong emphasis on providing access to early education in rural areas. There are guarantees in place that pre-primary and primary education can be provided locally. The nine years of unified basic school education constitute a comprehensive system for the development of basic and key competencies in an equitable way, while upper secondary education has the potential to provide appropriate space for choice and specialisation.

Given the dramatic demographic decline (see Chapter 1), the need for the consolidation of the school network is accepted by all key stakeholder groups. There are inefficiencies which result from the existence of too many and too small founder units. Under the pressures created by the funding system, the adjustment of the school network has already started (see also Chapter 3). In general education, between 2005 and 2013, while the number of students declined about 22%, the number of schools dropped by about 9%; between 2008 and 2013, while the number of students declined about 8%, the number of teachers dropped about 6% (see Tables 3.6 and 3.7 of Chapter 3). The decrease of the number of schools and teachers is slower than the decrease of the number of school age students but it shows some capacity of the decentralised system to adapt to the demographic changes. The government is strongly committed to the further consolidation of the school network as demonstrated by its direct intervention in general upper secondary education, the creation of incentives for municipalities to consolidate their schools, the steering of a part of EU structural and investment funding towards improvement in educational infrastructure and its readiness to take over the responsibility for a part of educational expenditures so far covered by municipalities (see also Chapter 3).

Supplementary services and educational support are provided

Most schools provide a rich offer of extracurricular activities in the large majority of municipalities. There is no widespread shadow educational service system through which better-off parents are investing in extra tutoring for their children in order to compensate for the weaknesses of the formal system. Also, the emerging network of regional counselling centres in each county is providing a good basis for further development of access to additional special services for children with special learning needs.

Individual schools are key players in quality assurance

The quality assurance system is able to ensure a good balance between formative (developmental) and accountability purposes with a strong emphasis on schools' own quality self-improvement, whilst doing away with too much central government control and intervention. Therefore, school-based self-evaluation is the keystone of the overall quality assurance system in Estonia, ensuring individual schools assume most responsibility for the quality of school education (see also Chapter 4). School leadership, pedagogical staff and representatives of the school community have been developing good capacity to engage in self-evaluation-based school improvement. However, as elaborated below, the level of externality in quality assurance processes is low.

The VET system is strengthening its co-operation frameworks with the actors of the labour market

The Estonian government is adequately placing increasing emphasis on strengthening the mechanisms for the vocational education and training system to adjust to changing labour market needs. To a large extent this adjustment occurs via the close involvement of the representatives of different economic sectors both at the national level and the school level. There is also significant investment in the improvement of the labour market monitoring system that has the potential for making educational and financial planning for vocational education and training more evidence-based. The new qualification standards for vocational education are further improving the flexibility of the vocational

school system, including through a better integration of general and vocational elements. However, as elaborated below, vocational students have few opportunities to directly interact with the business world through apprenticeships and work-based learning.

Funding from the European Union creates opportunities to increase the efficiency of the school system

Estonia, similarly to other Central and Eastern European Countries, is using the EU structural and investment funds to modernise its education system. This is a major historical opportunity to achieve not only reforms improving the quality and relevance of education but also to realise the necessary structural adjustments to make the education system more efficient and financially more sustainable. Initially a significant amount of EU funds was used to improve school infrastructure, particularly in vocational education. The new strategic planning for the use of EU structural and investment funds for the period 2014/20 corresponds to the priorities set out in the Estonian Lifelong Learning Strategy 2020 and will be used as a powerful instrument to promote changes leading to higher efficiency and effectiveness in the Estonian school system. For instance, the new funds are being used to develop the new network of state-run upper secondary general schools and to assist municipalities to improve the quality of the provision at the basic education level as they consolidate their school network (see Table 3.4 in Chapter 3).

Challenges

There is an unclear distribution of responsibilities between the state and municipalities and a lack of co-ordination mechanisms

The distribution of responsibilities between the state and the municipalities for the provision of public education services is complex and leads to an unclear distribution of responsibilities. In fact, the municipal and the state-owned schools engage in competition in general education, in special needs education and – to a lesser extent – in vocational education and training. This results in declining clarity of the responsibilities for setting the funding rules and for leading the school consolidation process. And it happens that, for example, designing and managing the school network can be achieved only through a strong co-operation of all relevant agencies, especially the state and local governments.

However, as part of a larger strategy to clarify responsibilities in the education sector, the plan of the government is that, by 2020, the distribution of responsibilities between the state and municipalities for managing public schools will be as follows:

- The municipalities take responsibility for:
  - pre-primary schools and child-care institutions
  - primary schools (including support for special needs students in mainstream schools)
  - basic schools (primary and lower secondary education) (including support for special needs students in mainstream schools).
- The state takes responsibility for:
  - vocational education and training (VET) schools
  - general upper secondary schools (*Gymnasiums*)
  - special education schools (SEN schools) for more severe disabilities.

The steps to "recentralise" general upper secondary education are part of this medium-term strategy which, on the whole, may contribute to clarify responsibilities in the school system.

There is also some rigidity in school-level provision across levels of education, such as the frequent separation between pre-primary education and primary education, or the separation between general education and vocational education and training. The education of children below the school compulsory starting age has a low degree of integration with primary education. This is particularly reflected in the difference between the funding models used in the pre-primary education sector and in the primary and secondary education sectors. While schools are funded from the state budget through a formula, the public funding of pre-primary education is provided by municipalities from their own revenues. The difference in the funding models discourages municipalities to organise pre-primary and school education as integrated services where resources can easily be shared (even though there are cases of integration). Furthermore, the review team did not see examples of schools providing both general and vocational upper secondary programmes which could offer possibilities for students to move between the two tracks and also for teachers to use their competences in both fields. The general and the vocational subsystems operate quite isolated from each other and the review team could not sense any intention to get the two subsystems closer to each other.

Also, the multitude of small providers together with distinct responsibilities across education levels and school types raises co-ordination problems in relation to the management of the school network. Indeed, particularly in lower secondary education, education effective provision can be organised only through inter-municipal co-operation which allows the sharing of resources (for example teaching capacities, special children services or extracurricular facilities) between institutions. As concluded by an OECD Public Governance Review of Estonia, which also looked at education as a case study (OECD, 2011), "There appear to be many missed opportunities for greater efficiencies at the regional level, as well as for strengthening effectiveness. Municipalities rarely share administrative services (e.g. joint purchasing), teaching resources (e.g. special courses or distance education), or networks to support teacher professional development." This reflects the fact that incentives for inter-municipality co-operation are weak. This is reinforced by the fact that county level education departments have little power to assume co-ordination responsibilities as they are not perceived by municipalities as a legitimate partner for school governance.

The review team formed the impression that inefficiencies related to the management of the school network originate to some extent in co-ordination weaknesses. The decentralisation process, leading to the emergence of increasingly autonomous and powerful local actors (municipalities, individual schools), raises the question of how to assure co-ordination in this new context of multilevel and multi-actor governance. Normally decentralisation should be accompanied by the creation of new co-ordination mechanisms, adapted to the reality of the new governance context, including those covering the management of the school network. These new co-ordination mechanisms are apparently not yet sufficiently institutionalised, especially in the field of school network design.

The ambiguous distribution of responsibilities is reinforced by the funding system. The per capita funding formula has been so weighted as to create a common misconception that the existent structure of the school network is – and will be – fully state funded and directors are entirely responsible (see Chapter 3). The lack of a clear statement of objectives for the funding system leads to diluted responsibility for resource management, which ends up mostly in school directors' hands. Its implicit norm is that the national government will fully fund the current distribution of teachers across the school system. As a consequence, there is an emerging mismatch between responsibilities for management and responsibilities for funding. For example, there is a mismatch between the municipality responsibility for financing and the growing responsibility of school directors for human resource management.

The consolidation of the school network needs further progress

The major educational policy challenge in Estonia is the efficiency problem caused by the large discrepancy between school capacities and the number of students in a growing number of schools, which results from the dramatic demographic decline. This results in too many small schools and big differences in class size across locations and levels of education.

The organisation of the school network has been the subject of thorough analysis by the Praxis Centre for Policy Analysis (Põder et al., 2014), with a first study in 2005 and a second in 2014. The analysis of 2014 concludes that by the 2013/14 school year, the changes to the school network had fell short of what had been recommended by the 2005 study, with the number of basic and upper secondary schools significantly larger than what would be desirable given the number of students (Põder et al., 2014). Interviews with local government representatives indicated the major reasons limiting the extent of school consolidation were:

- *Economic factors*

  Closing schools involves additional costs such as transportation, dormitories, teacher redundancy, reconverting schools, etc. In addition, for small municipalities, the school is often the major local employer and state funds for the school constitute a large share of the municipality's budget.

- *Political, social and historical factors*

  The preservation of the local school is often part of commitments with voters, as a result of the social importance of the school. Also, historical differences between neighbouring communities may not facilitate the sharing of facilities among them.

- *Administrative factors*

  The fact that schools are not under the same owner for the same education level does not facilitate school consolidation.

- *School leadership-related factors*

  The way a school develops depends, to a great extent, on the quality of the school leadership. This often dictates the need to close a school or not.

- *Infrastructure factors*

  Existing buildings are not adapted to plans for modernising the school network.

The analysis provided by the Praxis Centre for Policy Analysis recommends a major consolidation of the current school network: by 2020 the number of basic schools should be 352, i.e. 132 schools less than in the 2013/14 school year. The need for consolidation

varies considerably across counties. There are counties where the number of basic schools already corresponds to the recommended estimate (Saare County, Tartu County, Valga County) while there are others where school consolidation is further necessary (Viljandi County, Lääne-Viru County, Lääne County). Assuming that 60% of basic school graduates move to a separate upper secondary school, and considering the upper secondary school network as covering the entire county, the study suggests that in 2020, 44 upper secondary schools would be enough to accommodate all students in that level of education. This figure is larger (58) if towns are considered separately from counties. In the 2013/14 school year, there were 194 schools offering upper secondary education in the country, thus the suggested decrease is significant, affecting all counties and most of all the city of Tallinn (Põder et al., 2014).

A major reason for the growing efficiency problems is the insufficiency of incentives for municipalities to adjust their educational capacities to the declining number of students and develop the necessary capacities for transportation and dormitories. The funding formula has not provided effective incentives for school consolidation so far (see Chapter 3). The other major reason, as explained earlier, is the little inter-municipal co-operation. There has been no county-level or locality-level medium-term planning of the school network (see also Chapter 3). The school consolidation that has been achieved thus far resulted mostly of ad hoc case-by-case decisions for specific schools within individual municipalities, many of which dictated because the decision could not be postponed any longer. The perception of the majority of municipalities of their role in operating local school networks is rather limited and self-constraining even in cases, when the size of their network would allow for more proactive and strategic policies. Municipalities in Estonia rarely consider the quality of teaching and learning provided by schools in connection to decisions of school consolidation.

The policy of "recentralisation" of general upper secondary education in Estonia emerged from the slow and incomplete adjustment to student numbers by the municipalities that generated the need for stronger central government intervention. However, the policy of establishing state-owned general upper secondary schools in each county may multiply capacities that maintain competition between state and municipality/city-owned schools for the limited and declining number of students (see also Chapter 3).

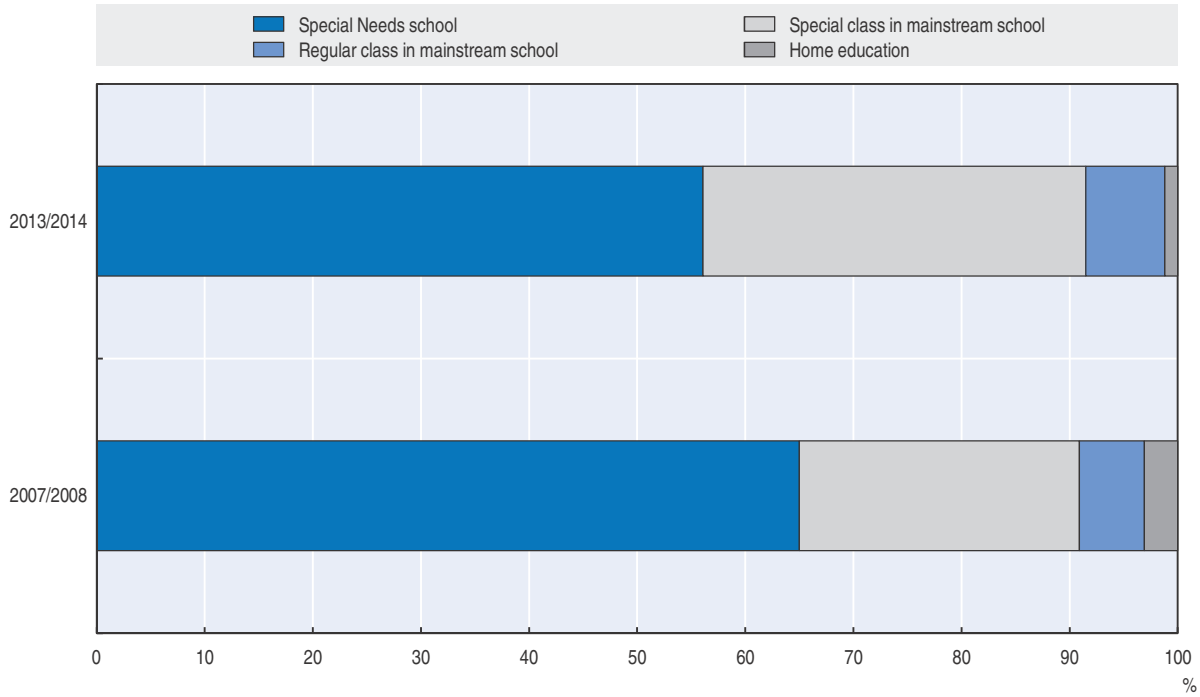
A final important note arising from the observations of the review team is that discussions about school consolidation were dominated by logistical factors such as number of schools, types of schools, distance to be travelled as well as financial factors (financial sustainability of maintaining schools). A lot less emphasis was given to quality of education as the main factor dictating school network decisions, i.e. the opportunities that school consolidation may offer to improve the educational experience for students.

In sum, the major area where the steering capacity of the national administration is being challenged, and where there might be a need for new, innovative forms of interventions is the governance of the school network. Given the inherited inefficiencies and the ongoing demographic changes, the rationalisation of the school network is unavoidable. But, as the politically autonomous municipalities are owners of schools, and as they take decisions on opening, closing or reorganising them, the processes of rationalisation require co-operation and sophisticated co-decision procedures.

Further efforts are needed to integrate students with special needs in mainstream schooling

Though Estonia has a well-developed network of SEN schools and programmes, relatively little progress has been made in integrating children with special educational needs into regular classes in mainstream schools (see Figure 2.5). While the proportion of students with special needs studying in mainstream schools has increased in the last few years, most of these students still attend SEN schools. Moreover, few of those in mainstream schools who are capable of following the regular curriculum are doing so in integrated classes.

Figure 2.5. **Proportion of students with special educational needs according to learning setting, 2007/08 and 2013/14**



Source: Ministry of Education and Research (2015a), *OECD Review of Policies to Improve the Effectiveness of Resource Use in Schools: Country Background Report for Estonia*, *www.oecd.org/education/schoolresourcesreview.htm*.

It does seem that not enough resources are being devoted to integrating special needs students in mainstream schools, and that parents are choosing to keep children who might do well in mainstream schools in special schools because they are getting more teacher attention. In interviews with the review team, educators and the parents of special needs students suggested that the decision not to send their child to mainstream schools is most often being driven by the feeling that these schools lack the skilled personnel and assistant teachers necessary to make the undertaking a success. In addition, in its interviews, the review team heard criticisms by teachers in mainstream schools who expressed difficulties coping with the presence of SEN children in their classes (see also Chapter 5). Whether this is because the funding that is provided to mainstream schools for special needs students is too low, or whether it is because there is a shortage of such specialists (or some combination of the two) is unclear. Furthermore, because funds for special needs students

are not transferred to local governments in the form of an earmarked grant it is difficult for schools, parents and the national government to monitor whether those funds are being transferred and used by schools for their assigned purposes (see Chapter 3).

A study on education opportunities for children with special needs undertaken by the National Audit Office (2006), which considered students with disabilities and learning difficulties, identified a number of problematic areas: i) an unsatisfactory system to identify special needs; ii) the often late identification of special needs; and iii) insufficiency of materials to assist special needs students (including in special schools) as well as a lack of required specialists. The study also noted that, in spite of the greater effectiveness of special schools in meeting the needs of students with more severe conditions, the treatment and rehabilitation services of special schools were limited. The audit confirmed that, in comparison with special needs schools, mainstream schools had not been able to offer similar conditions for the education of students with more critical and specific special needs. Hence, the recommendation was for mainstream schools to improve their conditions to receive students with special needs, namely through better logistical and material support and specialised support staff. Another audit (National Audit Office, 2004) pointed to the inefficiency of schools to respond to the needs of children with behavioural problems.

As the government further integrates students with special needs in mainstream schools the role of special education schools, both in terms of their profiles and in terms of their involvement in providing support services to SEN students educated in mainstream schools, needs to be reconsidered. The dominant European trend is to move towards more integrated education and this is accompanied by the functional transformation of special needs schools from primary service providers to SEN students to providers of professional support for mainstream schools educating inclusively students with special educational needs.

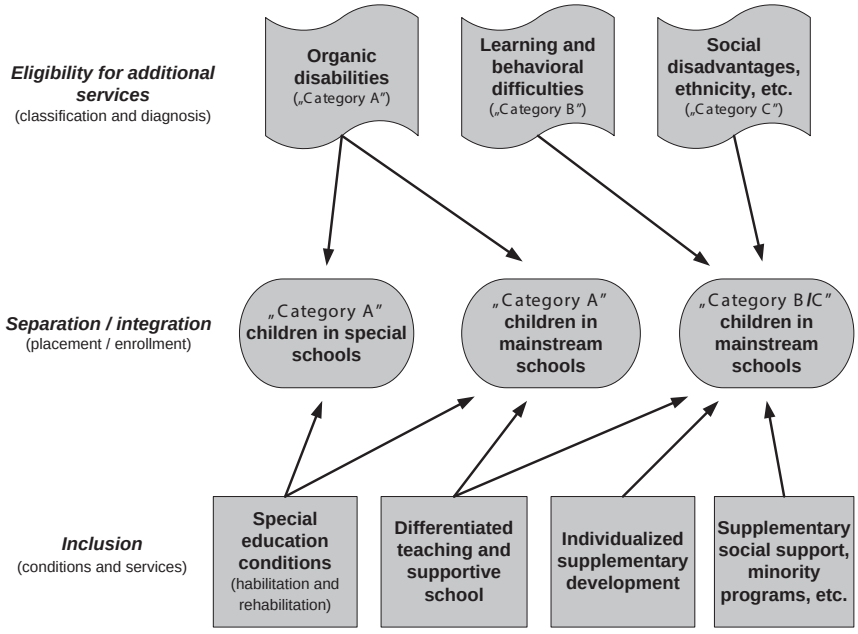
The integration and inclusion of SEN students is a very complex policy issue involving matters related to classification and diagnosis, placement (i.e. enrolment policies at national, local and institutional levels) and the professional conditions of inclusion. Therefore, determining the obstacles to the integration of SEN students is not an easy task. Overcoming these obstacles requires a great deal of research, analysis and planning. The typical obstacles to inclusion in the European countries are the following (Radó, 2009):

- *Ambiguous enrolment policies:* since the parents are the ultimate decision-makers in their children's education, regulations determining the space within which municipalities and schools make enrolment decisions often reluctantly give unambiguous priority to integrated placement. However, national governments have the legitimate authority to determine the type and severity of disabilities that special schools are eligible to serve.
- *Dysfunctional pre-enrolment assessment:* systems of pre-enrolment diagnostic assessment are often based on an outdated medical classification that provides the underlying bases for enrolment decisions. In many cases, these assessment systems do not use multiple and sophisticated instruments and methods. The decision-making procedures often do not ensure informed parental decisions. In a few countries categorisation determines not only the access to additional resources, but also placement decisions that often lead to stigmatisation.

- *The insufficient preparedness of mainstream schools:* since the success of inclusion depends on the professional preparedness of mainstream schools, the professional foundations of inclusion (i.e. the use of the methods of diagnostic and formative pedagogical assessment, differentiated teaching and the necessary conditions for supplementary individual development on the basis of Individual Educational Plans, physical and communication accessibility, etc.) must be in place in all schools.
- *Weak institutional capacities:* creating the conditions for mainstream schools to become "inclusive schools" requires the capacity of schools to identify their internal obstacles to inclusion, to implement school development programmes aimed at removing these obstacles and the capacity to institutionalise those internal procedures and co-operation frameworks that allow for successful classroom inclusion.
- *Counter-productive vested interests:* there might be various elements in the financial allocation system that may maintain vested interests in the separate education of SEN students. For example higher per capita funding for special schools, the lack of financial incentives for integrated education (e.g. not higher than for separated provision), social benefits provided through special schools, the lack of stability of available supplementary funds for inclusion if they are provided on a temporary and competitive basis, etc.
- *Resistance of the profession:* in countries, where the prevailing professional approach is based on "defectology", that is, on strong "medicalisation" of the problems of SEN students, especially in the case of children with "mild mental disabilities". In these countries the scope of pedagogical development is greatly underestimated, often resulting in responsibility shifts and creating wide competency gaps between mainstream and special education educators. Special school professionals' interest in maintaining segregated enrolment of SEN children is a major obstacle to the realignment of the discourse on the education of SEN students in many countries.
- *Lack or shortage of support services:* since the inclusion of SEN students is a highly knowledge- and support-intensive type of education, one of the most important prerequisites is a professional support system that reaches out to all schools and offers the required variety of support services. Beyond building a network of external service providers and ensuring the employment of specialists by mainstream schools, special schools provide support services to mainstream schools in many countries.
- *Low level of awareness:* Successful inclusion is impossible without the sensitivity of mainstream society, especially of those who make decisions and who are working with special needs students. The low awareness of the challenges of people living with disabilities or children with various difficulties reduces the sensitivity towards these difficulties in many countries.

Figure 2.6 provides a framework to analyse the integration of children with special educational needs.

Figure 2.6. **Framework for the inclusion of special needs children**



Source: Radó, P. (2009), *Improving the Inclusive Capacity of Schools in Serbia*.

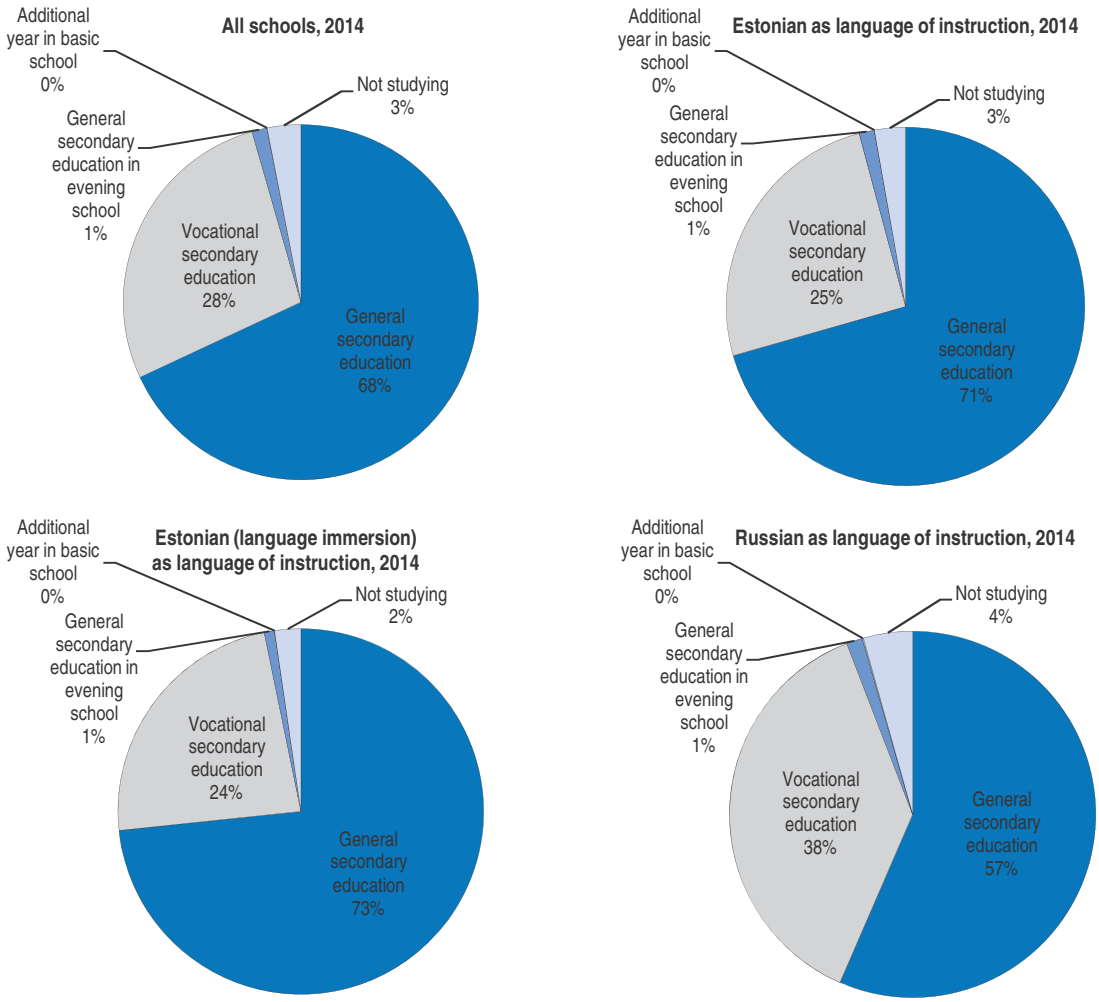
Russian-speaking students do not receive enough support

According to a study commissioned by the Ministry of Education and Research, the Estonian language skills of approximately one-third of Year 9 students in schools with Russian language of instruction do not reach the required B1 level of the Common European Framework of Reference for Languages (Estonian Public Broadcasting, 2015). The introduction of bilingual education in general upper secondary education and the ineffective teaching of Estonian in basic schools with Russian language of instruction may be increasing selection based on ethnicity. At the same time fully Russian language instruction programmes are still available in vocational upper secondary education. This may lead a greater proportion of Russian-speaking students to attend vocational schools at the upper secondary level. As illustrated in Figure 2.7, the proportion of basic education graduates going into a vocational secondary school the year after graduation is considerably higher for graduates from basic schools with Russian as the language of instruction (38% of them) than for graduates from basic schools with Estonian as the language of instruction (25%) and graduates from basic schools with Estonian (language immersion programme) as the language of instruction (23%). While the opportunity to continue studies in Russian might be an important factor in explaining the choice of vocational education, other factors such as family traditions in the Ida-Viru County or socio-economic background might also play a role. No research studies are available on this issue.

Also, as displayed in Figure 2.8, the proportion of graduates from basic schools with Russian as the language of instruction going into a vocational secondary school the year after graduation considerably increased between 2010 and 2013 (and slightly decreased between 2013 and 2014) while it remained mostly stable for graduates from basic schools with Estonian as the language of instruction. This could possibly result, at least in part, from the new 2007 regulations stipulating that Russian would progressively be discontinued as a language of instruction in general upper secondary education.

Figure 2.7. **Choices made by basic education graduates according to the language of instruction in basic school, 2014**

Distribution of basic education graduates according to their study choices the year after graduation

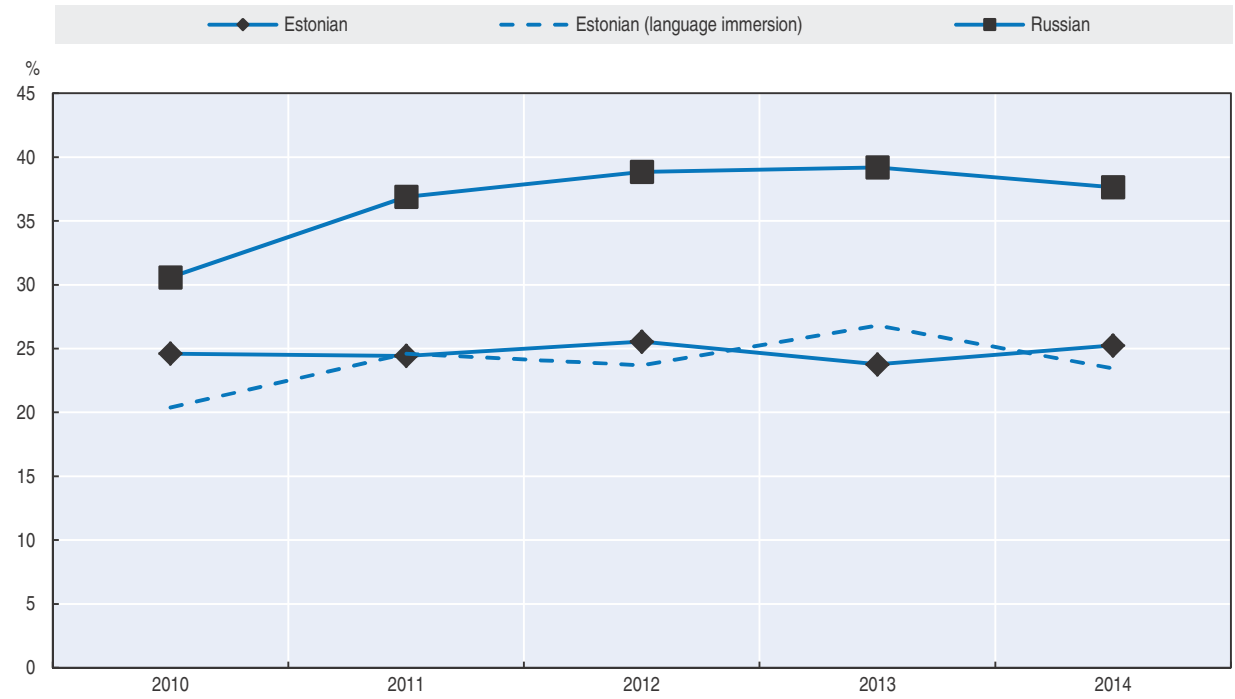


Source: Estonian Education Information System (*Eesti Hariduse InfoSüsteem*), *www.ehis.ee*.

While Estonia has a few programmes designed to provide additional financial support to schools with Russian language of instruction, as well as additional Estonian language training to Russian-speaking students, these programmes are of limited scope.* While the school funding formula provides for extra funding for Russian-speaking students (i.e. a higher coefficient in the salary grant, presented explicitly in the formula as of January 2015, see Chapter 3), potentially for extra teaching hours in Estonian language, the actual use of this extra funding is not audited. In addition, difficulties in mastering Estonian are imposing sometimes significant costs on (primarily) Russian-speaking households for private language instruction.

* To some extent, the language immersion programme that has been developed for Russian speakers is trying to address this problem. But it is available only in selected schools and is funded on a case by case basis, and not as a system wide solution (see Chapter 1).

Figure 2.8. **Proportion of basic education graduates entering vocational education the year after graduation according to the language of instruction in basic school, 2010-14**



Source: Estonian Education Information System (*Eesti Hariduse InfoSüsteem*), *www.ehis.ee*.

There are concerns about the resourcing of regional counselling centres

While the new Regional Centres for professional, student and psychological counselling hold great promise for improving the day-to-day functioning of the system, increasing cost effectiveness, and for providing critical information about the system's weak spots and fault lines, these institutions are still a work in progress. They will need sustained support to develop the personnel, procedures and practices necessary for them to fulfil their promise.

In the short term, it is unlikely that they will be able to support themselves on fees paid by schools, households, and teachers. As a result, a large part of their financing will have to be covered by the European Social Fund (ESF). But downstream, it will be important to put additional funds into school budgets so that they can purchase services from these Centres. As with mainstreaming special needs students, ensuring that Russian-speaking students acquire proficiency in Estonian, and improving VET enrolment and retention rates, it is important that financial incentives be aligned with policy priorities (see also Chapter 3).

The vocational education sector has low status, high drop-out rates and little work-based learning

Enrolment in vocational secondary education constitutes about a third of enrolment in secondary education, which is lower than the OECD average (see Chapter 1). The Estonian government is actively seeking to expand VET enrolment through higher quality facilities, a more streamlined supply of programmes (assisted with the establishment of new occupational standards), and greater flexibility of provision. Nonetheless these intentions

are facing important obstacles such as the low status of vocational education among students and parents, the strict separation between general and vocational education schools and possibly the little effectiveness of career guidance in basic education.

Another major challenge is the high rate of drop-outs in VET education (or interruption of studies). Although the organisation of studies in vocational training has been made more flexible with the help of new forms and types of studies, the interruption of studies in vocational training has been rising. Between 2004/05 and 2010/11 approximately one out of every five students enrolled in vocational training interrupted his/her studies, which makes a total of 40 063 students. Later only a tenth of them managed to obtain a vocational or higher education qualification. The early school leavers who later successfully finished school include mainly students who had interrupted their post-secondary vocational training (Espenberg et al., 2012). The study by Espenberg et al. (2012) identified the following major reasons for interrupting vocational studies: i) an incorrect choice of specialty which indicates inadequate career counselling in basic education; ii) the weak preparation of students, including in terms of basic skills, as they enrol in vocational education; iii) placing a low value on education, which leads to student absenteeism; iv) a lack of processes for the early identification of learning difficulties, associated with a lack of mentors/supervisors at VET schools; v) traditional teaching methods used by teachers, which reduce students' motivation; and vi) instances of school bullying.

A further limitation of VET in Estonia relates to the few opportunities students have to engage in work-based learning and apprenticeships. This relates to the fact that businesses remain little involved in the provision of vocational education and training (OECD, 2012b). Most vocational students attend school-based education, where students typically only complete 4-6 months of internships. Only 2% of youth who complete vocational education do an apprenticeship (OECD, 2015). Graduates from work-based VET typically fare better than those from school-based programmes. The probability of being employed is significantly higher for work-based VET graduates and their transition from school to work quicker. There is also an income premium of work-based VET graduates relative to school-based graduates. Evidence across OECD countries also shows that labour market outcomes of vocational graduates improve if substantial work-based training is built into programmes (OECD, 2014b).

The level of externality in quality assurance processes is low

Educational quality assurance at national and municipal levels might require some adjustments. While there is a sound emphasis on school level self-evaluation and school development in Estonia (see Chapter 4), the review team formed the impression that the external support provided to schools for self-evaluation and self-evaluation-based development could be expanded, especially in smaller municipalities. The government does not operate an extended network of various quality-related external services, which can be provided to schools and school management teams, such as advisory support, coaching, in-service training for quality improvement, etc.

Also, while the rather formative character of the external quality evaluation system fits in well with the ruling bottom-up (school-based) system of responsibilities for quality and effectiveness, relatively little comparable quality information is provided to schools for self-evaluation. For example, the self-evaluation indicator data collected by the Ministry of Education and Research do not establish a benchmarking system and schools receive very little external feedback on the performance of their students. This might be the reason why

the success of schools is still widely judged upon by very traditional indicators, such as the achievements of the best performing students in Olympiads, marks given by teachers and the offer for extracurricular activities. An implication of governance based on learning outcomes, as is now the case, is the need for better information on whether learning targets are actually being reached. In general, in Estonia, there is little external challenge to the conclusions of school self-evaluations (see also Chapter 4).

Also, with the exception of the biggest cities in the country, there is very little evidence suggesting that municipalities are operating a serious regular system of the appraisal of the work of school directors (see Chapter 4), or more generally operating a quality education framework. Therefore, management decisions at the level of municipalities in most cases are weakly connected to those at the school level through planning, as well as through an accountability system for school directors. The mismatch between the increasing responsibilities of school directors and the often weak local accountability systems may grow to be an issue of concern in Estonia in the future. While the national system of governance has shifted in the direction of a learning outcomes-based model, the work of most municipalities remains very much input-based.

Finally, the co-ordination among the different elements of the quality assurance system, that is, among external assessment and examinations, the educational information system and external school evaluation is not fully ensured, because inspections performed by county government offices are not supervised by the Ministry of Education and Research. In addition, although the Ministry collects the data for self-evaluation indicators, county governments run thematic evaluations only. Although inspectors use national indicators during thematic inspections, the connection between external assessment and self-evaluation is weak (see also Chapter 4). Therefore, the link between self-evaluation and external evaluation – one of the pillars of the EU recommendations on educational quality assurance – is not fully ensured (European Commission, 2001). These might be the reasons why integrated feedback of quality evaluation information to school owners and schools lags behind the amount and quality of information that is produced on a regular basis.

There is a lack of capacity at the local level

One of the specific challenges Estonia seems to face in governing its school system is that while key decisions such as school reorganisations, closures or mergers have been transferred to local governments as school owners, most of the information and administrative capacities have been retained by the central government. However, the capacities of most municipalities to manage schools are relatively weak. The number of municipal staff working on education in small municipalities is typically very small and they often also take responsibility for social services and cultural programmes (OECD, 2011). Many of the small municipalities delegate most of their competences such as quality assurance or budget management to schools themselves. This challenge flows from the small size of the majority of municipal self-governments. Over 80% of the municipalities have a population under 6 000 inhabitants, the majority of them have fewer than 3 000, while about 70% of the population of Estonia lives in cities (OECD, 2011).

Schools in rural areas are facing specific challenges that municipalities have to address, such as attracting qualified teachers, maintaining the expected instructional quality in spite of more scarce resources, making extracurricular activities available to

students, consolidating schools, ensuring access to professional services for students and teachers, ensuring the transportation of students, etc. These are often difficult challenges to meet with the little capacity that is typical of small municipalities.

The regulation of the private school sector raises some concerns

Apart from offering parents greater school choice, other benefits of the way the schools' market operates in Estonia are elusive. New entry by private schools, encouraged by the funding system, has resulted in smaller schools and class sizes and hence a higher cost school system with no evident increase in student learning outcomes (see Chapters 3 and 5). Similarly to other systems that are based on per capita funding, especially those which allow private institutions to have access to public funding, the Estonian system faces the challenge of undertaking adequate selection of those services and providers that should be eligible to receive public funding. This requires a continuous monitoring of the existing school licensing processes assuming the selection function, and, on the basis of this, revising standards and the application of these standards when necessary. If this does not happen, funding claims by new services and providers may create unexpected burdens on the public purse (see also Chapter 3). There is a need to increase the transparency of licensing decisions, particularly in terms of the assessment of need for the additional educational services. This is particularly valid for the decisions to register private providers into the publicly funded network.

Policy recommendations

Clarify responsibilities in the education sector

There is a need to clarify responsibilities in the education sector. The government's medium-term intention of establishing a division of labour, within public education, whereby municipalities provide pre-primary, primary and lower secondary education and the state takes responsibility for upper secondary education (both general and VET) and special education schools seems a good step in that direction. This will reduce unnecessary duplication; provide the potential for better co-ordination within education levels (or school types); establish closer linkages between funding, school management and accountability; facilitate the alignment between education strategic objectives and school-level management; reduce ambiguities in defining who is responsible for what; and assist with school network planning. For example, having the state take responsibility for both VET and general upper secondary education is likely to facilitate bridges between the two sectors and allow upper secondary education to be managed as a unified subsystem.

The government's goal of "recentralising" general upper secondary education is an important step in simplifying the governance of public schooling in Estonia. As suggested in Chapter 3, however, this needs to be done in recognition of the established experience and capacity for larger municipalities to provide general upper secondary education. The approach, as elaborated in Chapter 3, should be the development of a state-level regulatory framework for general upper secondary education where room exists to delegate the provision of the services to those municipalities with enough capacity and experience. This will lead to a more efficient consolidation of the network of general upper secondary schools. However, "recentralisation" of upper secondary education entails the risk of weakening the links between education and regional development planning. As a result, an important aspect to the "recentralisation" process to keep in mind is the importance of establishing mechanisms that ensure that regional development objectives remain a

relevant dimension in defining the supply of courses at each upper secondary school. It is important that upper secondary schools remain responsive to regional needs and are open to diverse regional and local expectations. Therefore, as recommended below, decisions on educational programmes offered at upper secondary schools as well as decisions on the organisation of the network of upper secondary schools should involve co-ordination at the county or regional level with consultation of the relevant stakeholders.

Further consolidate the school network through co-ordination across school owners

Make the best interest of students the guiding principle for school consolidation

It is clear that with the current demographic of Estonia, school consolidation remains a top priority for education policy. There is still considerable room for efficiency gains through school consolidation. However, it is important to keep in mind that school consolidation should be about making optimal choices to ensure quality education for children. The objective should be to ensure that students' access to high quality education is not affected adversely by where they live.

Achieving efficiencies and ensuring public funding invested in education is having optimal impact is mainly about ensuring the highest possible quality of education for students with the available resources. It is therefore important that the focus is not on savings or a prioritisation of accessibility over quality. The key question in considering school consolidation must therefore be what is in the best interest of students. In some cases, closing the school may not be the best solution – the distance to travel may simply not be practicable. However, in others consolidating educational provision on fewer sites will present wider opportunities for both students and teachers and steps should be taken to ensure this happens.

Consider a range of strategies to rationalise the school network

In the consolidation of the school network, in particular in small municipalities, Estonia can consider a number of different options (see Ares Abalde, 2014, for further considerations about these options):

- *Closing or consolidating small schools.* An option, especially for those small schools where the quality of the learning has been identified as deficient, is the closure of the school. Assessments could be conducted at the regional level, in the context of the regional planning platforms suggested below, to identify such schools. The assessment should consider the (financial, human and political) costs, feasibility and acceptability of different alternatives such as transporting students and housing them at boarding schools. Alternatively, consolidating schools with the reduction of services (e.g. a school providing only primary education instead of Year 1 to Year 9) will avoid their closure. This is in the spirit of the modular approach to school consolidation proposed below.
- *Sharing of resources between nearby schools.* Sharing of resources among schools, possibly belonging to different municipalities, is a practice followed in a number of countries, in which a group of schools located close to each other retain their individual identity and legal status (thus each will still have its own school leader and its own reporting requirements), but they agree to share specific resources to lower the cost and improve services rendered to students. Shared resources may include teachers (who would conduct lessons and other activities in more than one school), sport facilities (open to

students from all schools participating in the collaboration), computer labs and similar. Box 2.1 provides an example of the sharing of resources among schools in the Flemish Community of Belgium.

- *Clustering of schools*. The clustering of schools involves the conversion of several nearby small schools into satellites of one educational institution with a single leadership team. This means that the legal status of smaller schools is changed, and only one school leader of the central school will manage the operations of all satellite establishments. Similarly, there is only one budget for the whole school cluster encompassing the central school and the satellite schools. This institutional structure allows not only transportation of satellite school students to the central school, but also travel of central school teachers to satellite establishments to conduct classes there, for example on specific school days. Moreover decisions need to be taken about the location of new education resources, such as teacher working time or equipment: whether they are more efficiently used in the central school or in the satellites. Similarly, it is necessary to decide for each satellite school which years will be taught there. Since this is typically the autonomous decision of the school leader, significant flexibility in the use of resources may be achieved under this arrangement. Box 2.1 provides the example of school consolidation in Portugal which was greatly based on the creation of school clusters.

Introduce effective co-ordination and planning mechanisms to manage the school network

Given the current efficiency problems in managing the school network, the establishment of a strategic reflection on the development of institutional mechanisms for school network co-ordination and planning is to be given high priority. The particular specificities of each county or region imply that the strategic reflection on effective school network co-ordination and planning should have a strong county or inter-municipal dimension with the general goal of "regionalising" school network design and planning. This is in the spirit of the recommendation by the OECD Public Governance Review of Estonia: "In the education sector, the national, county and municipal governments should consider co-operating to create regional 'cluster districts' (also sometimes referred to as 'collaboratives' or 'federations') as a way to encourage more effective and efficient management of education" (OECD, 2011).

The strategic reflection on effective regional (county-level or inter-municipal) school network co-ordination and planning should raise the question of the nature of the planning process, as well as the role of counties and municipalities in the process. The review team considers that regional school network planning should be a process based on social consultation and deliberation, that is, it cannot be purely a technical/administrative process managed fully by the national authorities and their county-level units. It does not have to necessarily be organised by counties' government offices. It can be convened by the national government through a body bringing together the representatives of school owners at the county level (or, alternatively, in a territory bringing together several municipalities).

The creation of regional (county level or inter-municipal level) planning platforms covering all levels of school education, with the involvement of all relevant stakeholders (including municipalities, private providers, the regional representatives of the world of work, county government representatives and also the representatives of national authorities) could be a first step towards improving co-ordination of decisions concerning the school network. It is expected that the Ministry of Education and Research would be a

Box 2.1. **"Communities of schools" in Belgium (Flemish Community) and school clusters in Portugal**

In the Flemish Community of Belgium, communities of schools for primary and secondary education have been promoted by the government, starting in 1999. The objective was to make schools work in collaboration by sharing resources, rationalise the supply of courses and promote cost savings across schools. The government's aspirations were that this new system would enable the enhancement of student guidance systems, particularly in relation to their educational career trajectories; the lessening of the managerial-administrative burden on school directors so that they become pedagogical leaders; the increased use of information and communication technologies (ICT); and the rationalisation of resource use both in relation to staff recruitment, functioning and evaluation and in relation to co-operation in curriculum. The government incentivises participation of schools in these communities by allocating additional staffing and other resources (e.g. "envelopes" of teaching hours) specifically to be used through collective decision making processes established freely by the communities of schools. Overall, communities of schools have been successful in strengthening co-operation in an environment based on school choice and competition. The evaluation undertaken for secondary school communities shows that communities have strengthened co-operation in developing common personnel policies and policies to allocate human resources across the schools involved and there seems to be informal co-operation with other school levels such as primary schools and special education. Yet there is still scope for co-operation in rationalising education supply and infrastructure across schools and in providing effective guidance for students. The OECD Review of School Leadership provides several country examples of school collaboration (see Pont et al., 2008, Table 2.1: 57).

In Portugal, about 2 500 schools closed between 2005 and 2008 compared with 1 000 in the previous 10 years. Rural areas were dominated by small schools with poor facilities, while urban areas had overcrowded schools with double shift education. Research showed inefficiencies, lower academic performance in smaller schools, higher teacher turnover and variable quality in rural areas. The government determined that small schools with year repetition rates higher than the national average were to be closed during 2005/06 and clusters of schools should be created. The reorganisation and redeployment programme had several instrumental features: i) there was a clear central vision about what type of schools should replace the closing schools, which were larger school centres with a minimum of 150 students at more than one level and full-day school with extracurricular activities; ii) it was recognised that parents needed to be convinced that the outcomes for them and their children would be better and incentives, including free transportation, were provided; iii) municipalities needed incentives to invest in new provision; and iv) the consultation and decision making processes needed to be applied carefully as previous attempts to close schools had failed. In general, the reorganisation process brought about innovations and improved efficiency of the schools, reduced isolation of teachers, improved socialisation of underprivileged or isolated students, and fostered a collaborative approach between the Ministry of Education (centrally and regionally), municipalities, schools and other stakeholders (Ares Abalde, 2014).

Sources: Pont, B., D. Nusche and H. Moorman (2008), *Improving School Leadership, Volume 1: Policy and Practice*, *http://dx.doi.org/10.1787/9789264044715-en*; and Ares Abalde, M. (2014), "School Size Policies: A Literature Review", *OECD Education Working Papers*, No. 106, *http://dx.doi.org/10.1787/5jxt472ddkjl-en*.

strong player in the field of school network design and planning. As suggested in Chapter 3, while the review team supports the government's goal of "recentralising" general upper secondary education as an important step in clarifying responsibilities within education, the implementation of this strategy should involve both a dialogue with municipalities (to determine which ones could maintain the operation of their *gymnasiums* under a state-defined regulatory framework) and co-ordination at the county or regional level to define where the operation of state-run *gymnasiums* is pertinent.

Encourage co-operation among municipalities

The planning processes should also encourage more horizontal co-operation between municipalities, especially in the case of those of smaller size. Such co-operation is not facilitated due to the lack of efficient organisational and financial models, the weak county level co-ordination and the strong role of school directors, making co-operation for jointly provided educational or connected services very rare (OECD, 2011). Given the existing barriers to co-operation, the national government should consider providing incentives, facilitating formal agreements between municipalities, and building capacity for co-operative work (OECD, 2011). Of course, any national efforts to develop mechanisms for sub-national co-operation will need to be developed in partnership with municipalities and counties (OECD, 2011).

Improved territorial co-ordination could also benefit from the strengthening of the role of the educational departments of the county government offices. This territorial co-operation might be a good instrument to encourage inter-municipal collaboration for the provision of school services, such as co-management of basic schools across municipalities, improving transportation services and the common use of various facilities, joint purchasing, school maintenance, improving the access to professional services, etc.

Take a "modular approach" to school consolidation

The discourse is often about "closing schools" although in many cases the reduction of services would not necessarily imply the closing of whole institutions. The review team recommends a more "modular" thinking on school network solutions which allows the use of rationalisation techniques not in terms of whole institutions but in terms of specific services within these institutions. For example, instead of closing schools, decision makers could consider reorganising local provision so that pre-primary classes are provided alongside primary classes (i.e. at the same school), which would facilitate the provision of education services in smaller municipalities possibly in a context where the maintenance of a full basic school is financially not sustainable. Making a clear distinction between the primary and lower secondary education levels would also reflect this "modular" thinking. Similarly, in the case of secondary VET it is suggested that thinking shifts from "institutions" to "programmes within institutions". It should be noted that the steps taken by the Estonian government to separate general upper secondary education from basic education (e.g. by not allowing municipalities to create new schools combining Year 10-12 and basic education) are undertaken using this "modular" approach.

State should clarify what it is funding

Of course, a fundamental component of the strategy to achieve school consolidation consists of the incentives mechanisms built into the school funding formula. These are

explained in Chapter 3. In this respect, the planning of the school network would benefit from a clear message from the central government about what are the objectives of the public funding of education and what it is actually funding through its education grants. For example, in addition to stating that it is funding a given minimum salary for teachers, it could define that public funding is to be used for classes above a given minimum size (see Chapter 3). In this way, municipalities would know that if they wish to maintain classes below such minimum levels, they would need to contribute their own public funds.

Use EU funds to further assist school consolidation

The Operational Programme for Cohesion Policy Funds 2014-2020 (Ministry of Finance, 2014) already provides, under Investment Priority 2, for funds targeted at assisting with school consolidation processes, in particular the development of the new network of state-run upper secondary general schools and support for municipalities to strengthen their basic education schools (see Table 3.4 in Chapter 3). Within this context, the support for local reorganisations of education provision could involve the creation of appropriate conditions for school transportation and support for networks of municipalities to design and implement education development plans that improve the efficiency of resource utilisation. The review team also recommends the creation of a specific action line within the Operational Programme 2014-2020 that would support the creation of a school network planning platform in one or two counties, including a careful monitoring of the process.

Ensure entry into the school network derives from assessed need

Decisions on accrediting schools for entry into the school network – and therefore to benefit from public funding – should increasingly depend on needs analysis and quality assessment. Only services of proved quality should get public funding and only new services whose need has been identified should be allowed to become part of the school network. The review team proposes that in function of the further development of the national evaluation and assessment framework quality requirements are increasingly taken into account when decisions are made about the allocation or withdrawal of public funding for education services.

Make vocational education a more attractive option and improve its efficiency

In Estonia, there is a great need to make vocational education and training (VET) a more attractive option for students. A first priority is to ensure the labour market relevance of vocational programmes. This involves maintaining a close collaboration with labour market actors at the national, regional and school levels. In this respect, it is important to improve the responsiveness of individual schools to the identified needs in the labour market with an improved ability to swiftly adjust their supply of programmes. It is not clear to the review team that the strict planning approach of the State Commission for Vocational Education, defining publicly-funded places per occupation, is a better option to respond to the needs of the labour market than having student demand (properly informed by labour market outcomes) dictate schools' adjustments to their supply.

Furthermore, Estonia needs to provide more work-based learning and apprenticeships within its VET system, which require the development of strategies to ensure businesses are willing to provide such opportunities to VET students. The challenge to promote work-based learning is to find a balance among the productive work in work-based learning, the salary paid to the trainee and the level of subsidies (OECD, 2012b). The proper

balance may change from one sector to another. As recommended in OECD (2012b), Estonia should consider promoting a system where subsidies provided to firms are accompanied by quality control ensuring that part of the time spent in firms is devoted to instruction and not only productive work.

Another priority is improving the status of VET. Possible strategies to achieve this objective include greater partnership between general and vocational schools, the provision of up-to-date and economically relevant information, and advice and guidance not merely at the point at which students begin to make choices but from the earliest stages of compulsory education. Showcasing the successes of vocational education and identifying role models who can enthuse and inspire young people to take an interest in vocational pathways would also be a positive step. Another key aspect to make VET an attractive choice is to maintain partnerships between VET schools and employers, which encourages provision which matches labour market realities, makes VET learning more practical, familiarises employers with VET programmes and qualifications, and help teachers of vocational subjects to keep up-to-date. The main message should be that VET is a valid choice giving good prospects to students in the labour market or allowing students to pursue further studies at the higher education level and not the remaining alternative for students with weaker academic results in lower secondary education.

In addition, there is an imperative need to ensure that completion rates in vocational education improve. Strategies to achieve this objective include improved career guidance at the basic education level; supplementary general education classes to improve the basic skills as students enter vocational education; conveying the value of a vocational education degree to students (through improvement of career guidance within vocational education); establishing mechanisms for the early identification of learning difficulties or the inadequate choice of specialty (through individual mentorship systems within vocational education schools); instituting remedial programmes to address learning difficulties; offering professional development for vocational teachers to use more innovative teaching methods; ensuring practical elements of the training come early in the learning process; and ensuring that vocational options provide pathways to other learning opportunities in the Estonian qualifications framework (see also Chapter 3). Strategies suggested by Espenberg et al. (2012) are relevant in this respect. Also, as elaborated in Chapter 3, funding incentives can also contribute to improve the efficiency of vocational institutions.

Provide external support for evaluation and assessment

In order to ensure that all local players, especially school owners and school actors maximise the potential of school-based self-evaluation, it is recommended to strengthen the externality of school evaluation, to provide greater support and tools for school self-evaluation and to improve the performance information made available to individual schools (see also Chapter 4).

As far as external evaluation of schools is concerned, building upon the existing evaluation procedures operated by county government offices, the risk-based approach to monitoring schools can be strengthened with better student performance assessment data. In addition, support structures can be developed to monitor the quality assurance frameworks operated by school owners, especially municipalities. More fundamentally, it is suggested to develop a system to externally validate school self-evaluation in individual schools (i.e. an external audit to school self-evaluation), which could be performed by inspection services. In a system based on the responsibility of individual schools for

quality assurance, it is important to ensure school self-evaluation procedures are properly implemented. In addition to this, there needs to be mechanisms to externally challenge the conclusions of school self-evaluation. This could be done through formative external evaluations, possibly using a risk-based approach (as suggested in Chapter 4), whereby a group of external experts would establish a dialogue with the school to discuss its self-evaluation conclusions.

In addition, schools and municipalities could be provided with extra resources to strengthen their self-evaluation and quality assurance frameworks. This could include the availability of self-evaluation instruments training to interpret student achievement data, guidelines to develop school development plans, instruments for classroom observation, and resources for developing networks of schools to share practices and experiences. All these activities could continue being supported by the current officially trained quality assurance advisors (see Chapter 4), who could possibly be integrated in the services provided by the regional counselling centres.

Finally, schools could be provided with more informative data to guide their self-evaluation. This includes schools being provided with a data profile prepared on the basis of the data available from the Estonian Education Information System, so they can more easily "position" themselves within the overall Estonian school system. It could also be considered to transform the sample-based national student assessment in Year 6 into a full-cohort assessment so a more reliable assessment of whether or not the new education standards are met can be made at the school level.

Expand inclusive education for students with special educational needs and adjust the functions of special education schools

The movement towards the integration of students with special educational needs (SEN) into regular classes in mainstream schools has been very slow. This runs against Estonia's commitment to inclusive education and does a disservice to this small but important minority. It is also probably unnecessarily costly, though it also quite possible that implementing integration strategies in mainstream schools may initially be more expensive than educating SEN children in SEN schools. The solution lies, in part, in increasing the financial support given to mainstream schools for SEN students. In this way, the national government should review the coefficients used to provide additional revenue to mainstream schools for teaching SEN students in both mainstream and special classes (see also Chapter 3). These coefficients should make it possible for schools to hire well qualified teaching assistants to work in integrated classes. It is also important that funding for SEN students in mainstream schools is earmarked and that there are effective ways to monitor its use to facilitate the integration of SEN students in regular classes.

The expansion of effective inclusive education will also require SEN schools to enlarge their functions to support both students with special needs being educated inclusively in mainstream schools and teachers providing inclusive education in these schools. The example of countries, such as Germany, where the increase of mainstream placements has been important together with the high number of special schools has led to rethink the role of special schools' staff, might be relevant for Estonia. In Germany an increasing number of special schools' teachers are spending part of their working time in mainstream schools not only directly supporting children but also providing consultancy to class teachers (NESSE, 2012).

The other key component of a strategy for inclusive education is enabling mainstream schools to provide effective inclusive education. This can be a slow and gradual process which, however, can be significantly accelerated by massive and effective capacity building. The practice of inclusive education requires major changes both in the professional competences and the attitudes of mainstream teachers. Only teachers capable to use a rich repertoire of innovative teaching methods and capable to create learning environments that support personalised teaching and learning can achieve successful inclusive education. This requires a supportive institutional context characterised by an organisational culture which supports diversity and pedagogical innovations. Successful inclusive education can be realised only if massive capacity building in mainstream schools creates new capacities in these institutions and in their teachers to manage effectively classes where students with and without special needs are educated together. As recommended in Chapter 5, it is important that all teachers receive some preparation to manage classes with SEN students, either through initial teacher education or professional development programmes. In addition, VET school curricula could offer programmes to train teaching assistants to support the learning of SEN students.

Further support Russian-speaking students in Estonian language

The national government should consider developing an earmarked grant designed to provide financial support to local governments and schools for the additional hours of Estonian language instruction necessary to make Russian-speaking students proficient in the country's official language (see also Chapter 3). Language acquisition problems clearly pose barriers to, and raise the costs of Russian-speaking students advancing through Estonia's education system. As such, they run against Estonia's commitment to equal opportunity and fair treatment. The review team also believes that language barriers distort the choice of upper secondary programmes by Russian-speaking students in favour of vocational programmes, and thus ameliorating the basis for this choice would probably improve the efficiency of the system as well.

Sustain the support to regional counselling centres

The new regional counselling centres hold great promise for improving the day-to-day functioning of the school system and for providing critical information for its improvement. But they will need sustained support to develop the staff capacity, procedures and practices necessary for them to be attractive service providers for schools and local governments, and important sources of information for national policy makers about where the system needs to be adjusted to improve educational outcomes and social equity. It also seems logical to embed the discussion of the development of these institutions in the wider regional dialogues the review team is proposing to facilitate the consolidation of school networks. It seems similarly clear that at least some of Estonia's most skilled experienced teachers could be better utilised in developing these centres, than teaching small classes in small schools.

Improve capacity at the local level

Given the key role of municipalities in providing educational services, the capacity building of local actors should be a permanent priority. It is important to keep in mind that the professionalisation of local management does not depend only on the personal preparedness of local actors. In a wider professionalisation framework, the institutional

settings within which local actors operate (e.g. co-ordination and co-operation among municipalities), the professional support provided to local actors, feeding back assessment information on the work of municipalities and their services, as well as the access of local actors to vital information are key aspects to consider in improving capacity at the local level.

Part of the strategy involves capacity building programmes to be made available to municipality staff. These could emphasise quality assurance in education (including interpretation of performance data), managing local school networks, engagement with community members, communication and consultation processes, school development, financial planning and human resources management. This approach should be complemented with a network of advisors to support the education work of municipalities, possibly to be based in regional counselling centres.

In the spirit of collaboration, a valid option to increase capacity is to share education management resources among groups of volunteer municipalities. This could involve employing a number of specialised staff whose services would be available to different municipalities, in areas such as budgeting and financial control, planning of school network, provision of services to schools and use of data relevant for education management. In more general terms, municipalities should be encouraged to collaborate, including with regular opportunities for formal and informal exchange of practices. This could involve the identification and dissemination of effective practices.

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Chapter 3

Funding of school education in Estonia

This chapter is about the funding of school education. It deals with the level of resources available for school education and revenue sources. Furthermore, it discusses budget planning, the monitoring of funds' use as well as incentives for the effective use of school funding. The chapter places particular emphasis on areas of priority for Estonia such as the low levels of public expenditure on education, funding incentives to improve the effectiveness of the school network, equity implications of funding approaches, and the public funding of private schools. The chapter also reviews the autonomy of schools over the use of their funding, the management of school budgets and the use of EU structural and investment funds.

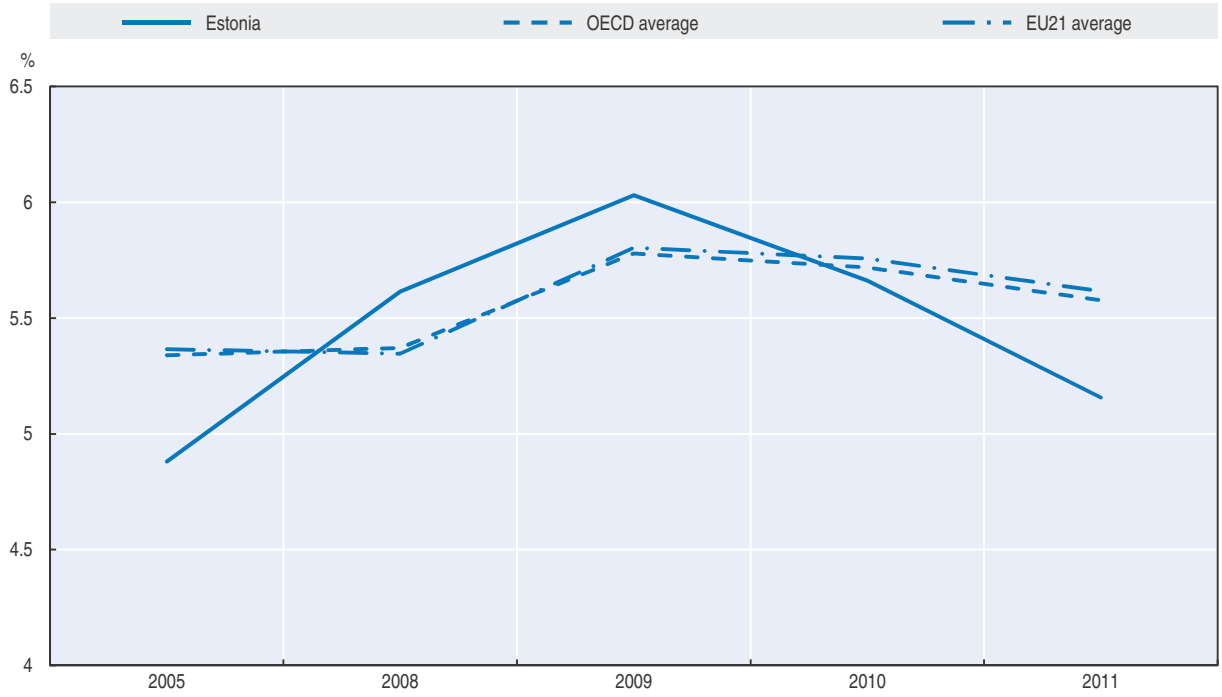
This chapter is about the funding of school education. It deals with the level of resources available for school education and revenue sources. Furthermore, it discusses the planning of resource use (e.g. definition of priorities and targets, distribution of responsibilities for resource use); the monitoring of resource use (e.g. audit systems); transparency and reporting; as well as incentives for the effective use of resources. In addition, it analyses the distribution of funding between the different levels of the administration (e.g. central and local) and between individual schools (e.g. through funding formulas and special targeted programmes). In addition, the chapter places special emphasis on funding incentives to improve the effectiveness of the school network and the efficiency of vocational education and training, while analysing the equity implications of funding approaches.

Context and features

Expenditure on education

Between 2005 and 2011, public expenditure on education in Estonia fluctuated between 5% and 6% of GDP. Between 2008 and 2010, it rose as the economy contracted while education spending remained stable (see Figure 3.1). Public education spending as a

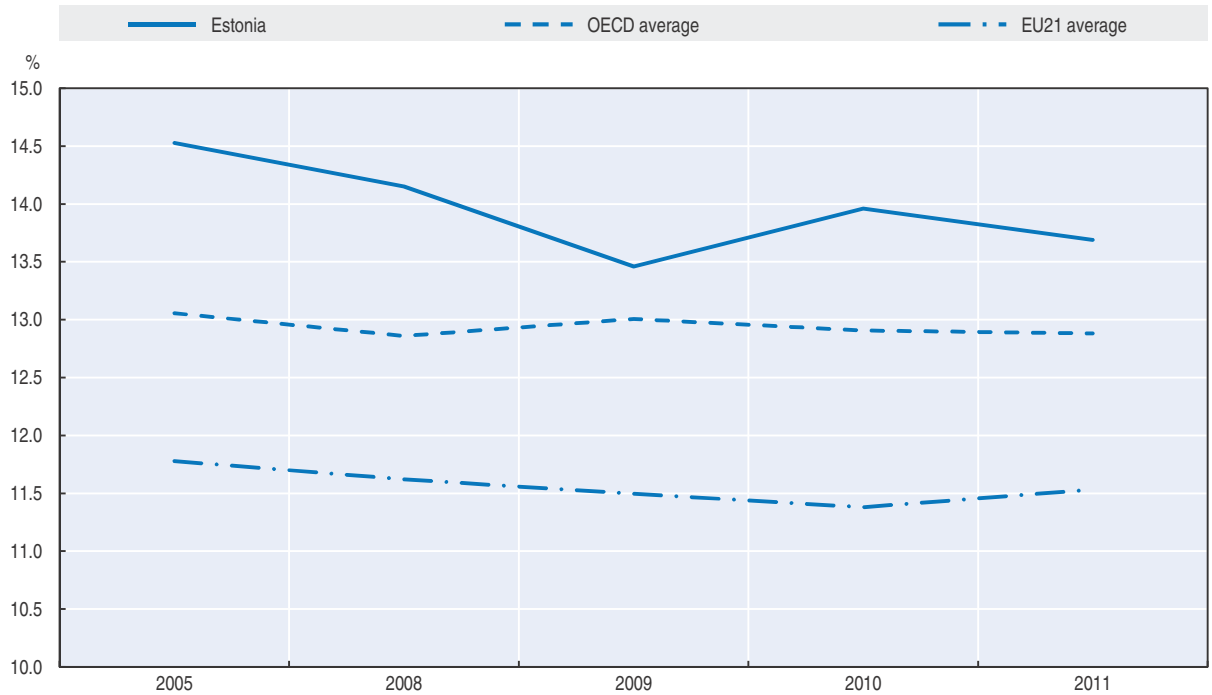
Figure 3.1. **Public expenditure on education as a percentage of GDP, 2005-11**



Notes: Public expenditure on education includes pre-primary, primary, secondary and tertiary education. It also includes public subsidies to households for living costs (scholarships and grants to students/households and students loans), which are not spent on educational institutions. EU21 average is the unweighted mean for the 21 countries that are members of both the European Union and the OECD and for which the data are available or can be estimated.
Source: OECD (2014), *Education at a Glance 2014: OECD Indicators*, *http://dx.doi.org/10.1787/eag-2014-en*, Table B4.2.

percentage of total public spending has declined from over 14.5% in 2005 to about 13.5% in 2011 (see Figure 3.2). While public education spending as a percentage of GDP is below both the OECD and EU21 averages, public education spending as percentage of total public expenditure is above the average for both OECD and EU countries (see Figures 3.1 and 3.2).

Figure 3.2. **Public expenditure on education as a percentage of total public expenditure, 2005-11**



Notes: Public expenditure on education includes pre-primary, primary, secondary and tertiary education. It also includes public subsidies to households for living costs (scholarships and grants to students/households and students loans), which are not spent on educational institutions. EU21 average is the unweighted mean for the 21 countries that are members of both the European Union and the OECD and for which the data are available or can be estimated.
Source: OECD (2014), *Education at a Glance 2014: OECD Indicators*, *http://dx.doi.org/10.1787/eag-2014-en*, Table B4.2.

Sources of funding

The vast proportion of funding for school education comes from the public sector – 98.4% for pre-primary education and 98.9% for primary and secondary education, percentages which are above the OECD and EU21 averages, as can be seen from Table 3.1.

Funding across education levels

Figure 3.3 shows public expenditure as a share of GDP by level of education in 2011. It shows that Estonia, as a percentage of GDP, spends relatively less than other OECD and EU member states in pre-primary, primary and secondary education. Public spending on tertiary education is similar in to OECD and EU21 averages but is likely to increase with the 2013 decision to eliminate tuition fees in tertiary education.

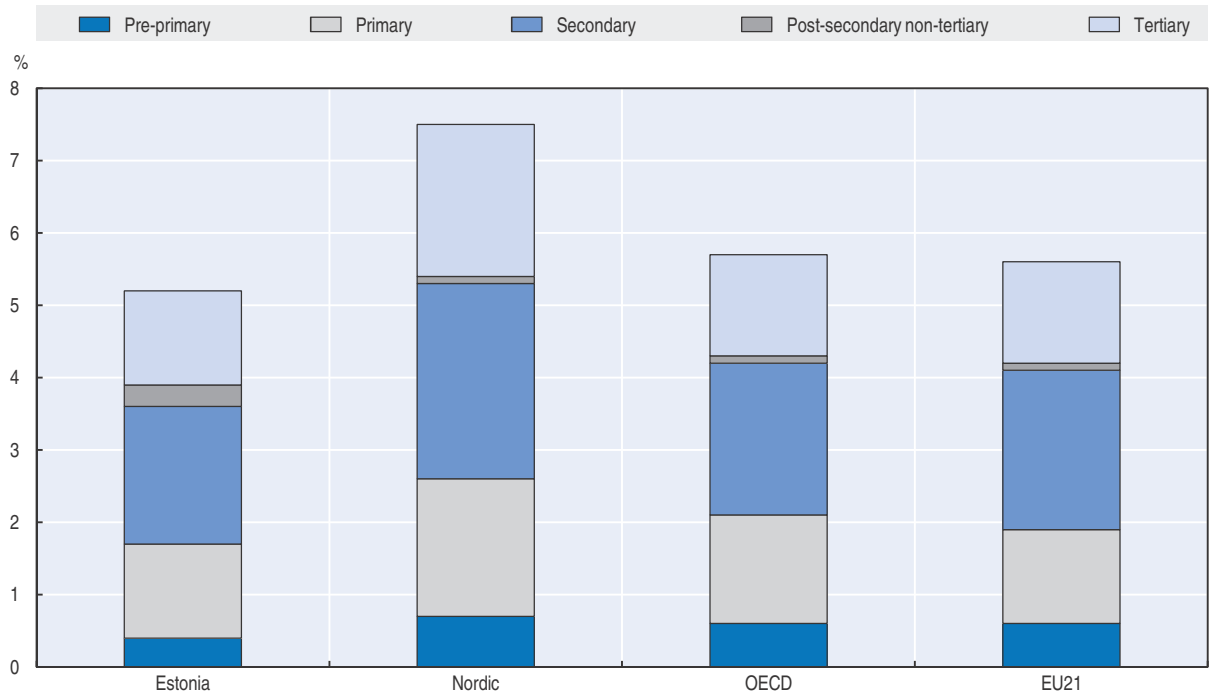
Per student spending for all levels of pre-tertiary education in Estonia is between 64% and 82% of the OECD average, except for pre-primary education where it is only 35% of the OECD average (see Table 3.2). Estonia – like most OECD countries – spends more per student on secondary education than per student on primary education. Indeed, per student spending on upper secondary education in Estonia is slightly higher relative to primary

Table 3.1. **Percentages of public and private funding of education, 2011**

	Pre-primary education				Primary, secondary and post-secondary non-tertiary education			
	Public sources	Private sources		Private: of which, subsidies	Public sources	Private sources		Private: of which, subsidies
		Household expenditure	All private sources			Household expenditure	All private sources	
Estonia	**98.4**	1.2	**1.6**	..	**98.9**	0.9	**1.1**	..
OECD average	**81.6**	..	**18.7**	2.8	**91.4**	..	**8.6**	0.9
EU21 average	**87.1**	..	**12.9**	2.8	**93.9**	..	**6.1**	1.1

Notes: "All private sources" includes subsidies to educational institutions received from public sources. EU21 average is the unweighted mean for the 21 countries that are members of both the European Union and the OECD and for which the data are available or can be estimated.
.. Not available.
Source: OECD (2014), *Education at a Glance 2014: OECD Indicators*, *http://dx.doi.org/10.1787/eag-2014-en*, Table B3.1.

Figure 3.3. **Public expenditure by level of education as a share of GDP, 2011**



Notes: Public expenditure on education includes public subsidies to households such as grants and scholarships. EU21 average is the unweighted mean for the 21 countries that are members of both the European Union and the OECD and for which the data are available or can be estimated. Nordic average is the unweighted mean for Denmark, Finland, Iceland, Norway and Sweden.
Source: OECD (2014), *Education at a Glance 2014: OECD Indicators*, *http://dx.doi.org/10.1787/eag-2014-en*, Table B4.6.

education than is the average for the OECD. It should also be noted that expenditure per student in upper secondary vocational programmes is higher than in upper secondary general programmes, reaching 82% of average OECD spending. Expenditure per student in secondary vocational programmes relative to expenditure per student in primary education is well above the equivalent ratio for the OECD area. This indicates that vocational secondary education is relatively well resourced in the Estonian context. Also, public expenditure in pre-primary education in Estonia relative to public expenditure in pre-tertiary education is considerably smaller than in the OECD area (see Table 3.2).

Table 3.2. **Expenditure per student, by level of education, 2011**

	Estonia				OECD average			
	Total expenditure		Public expenditure only		Total expenditure		Public expenditure only	
	Expenditure per student	Ratio to pre-tertiary education	Expenditure per student	Ratio to pre-tertiary education	Expenditure per student	Ratio to pre-tertiary education	Expenditure per student	Ratio to pre-tertiary education
Pre-primary education	2 618	0.43	2 573	0.56	7 428	0.84	6 043	0.76
Primary education	5 328	0.88	..	..	8 296	0.94	..	..
Lower secondary education	6 009	0.99	..	..	9 337	1.05	..	..
Upper secondary education	6 688	1.10	..	..	9 506	1.07	..	..
Upper secondary education – general programmes	6 153	1.02	..	..	8 613	0.97	..	..
Upper secondary education – vocational programmes	7 651	1.26	..	..	9 307	1.05	..	..
Pre-tertiary education (excluding pre-primary)	6 055	1	5 974	1	8 868	1	7 996	1
Tertiary education	7 868	1.30	5 405	0.90	13 958	1.57	9 221	1.15

Notes: Expenditure per student in USD converted using purchasing power parity (PPP) for GDP.
.. Not available.
Source: OECD (2014), *Education at a Glance 2014: OECD Indicators*, *http://dx.doi.org/10.1787/eag-2014-en*, Tables B1.1a and B3.3.

Funding across resource types

Spending on staff compensation as a percentage of total current expenditure for both primary and secondary education is low in comparison to OECD countries (see Table 3.3). This is largely because the salaries of Estonian teachers are relatively low and not because student/teacher ratios are high. In fact, student/teacher ratios have fallen significantly over the last 15 years and are now low (see below). Capital expenditure on the other hand is high in comparison to the OECD average, particularly at the secondary school level (see Table 3.3). Much – though certainly not all – of the high level of investment in secondary education is the result of national government efforts to modernise vocational education and training, relying on structural and investment funds from the European Union.

Table 3.3. **Compensation of staff and capital expenditure as shares of current and total expenditure, primary and secondary education, 2011**

	Primary education		Secondary education	
	Estonia	OECD average	Estonia	OECD average
Compensation of all staff as percentage of current expenditure	74	80	71	78
Capital expenditure as percentage of total expenditure	9	7.7	17	7.1

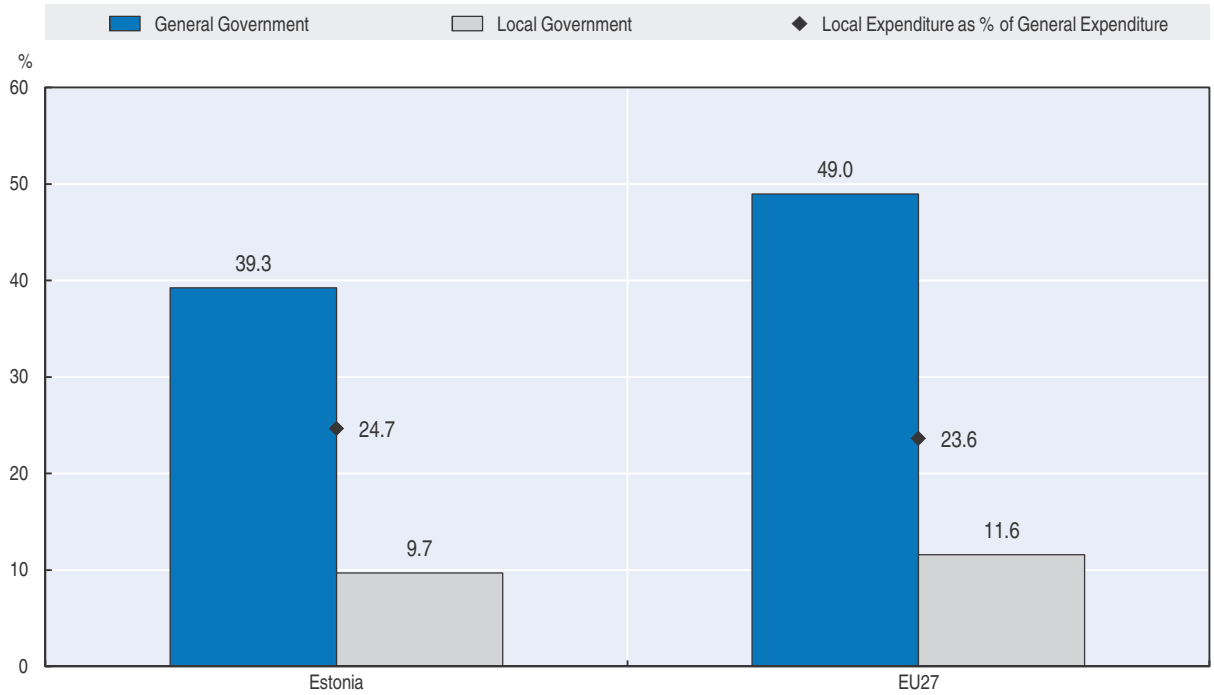
Source: Authors' own calculations based on Eurostat (no date), *Classification of the Functions of Government (COFOG)* database, *http://ec.europa.eu/eurostat/statistics-explained/index.php/Government_expenditure_by_function*.

Local governments play a key role in governing and funding school education

Estonia combines a small size of government with a commitment to the local governance of schooling

Local governments play a critical role in financing and managing Estonia's school education and the fiscal instruments used to finance local governments and to finance schools are deeply intertwined. Figure 3.4 presents local government expenditure as percentage of total public expenditure and of GDP for the period 2008-12 for Estonia and the 27 member states of the European Union (EU) in 2012. As can be seen from the figure, Estonia's public sector is considerably smaller than the average for the EU as a whole. Nonetheless, Estonian local governments are responsible for a higher share of public expenditure than the average EU member state.

Figure 3.4. **General and local government public expenditure as a percentage of GDP, average 2008-12**



Note: EU27 includes all European Union member states except Croatia, for which data are not available for the period 2008-12.
Source: Authors' own calculations based on Eurostat (no date), *Classification of the Functions of Government (COFOG)* database, *http://ec.europa.eu/eurostat/statistics-explained/index.php/Government_expenditure_by_function*.

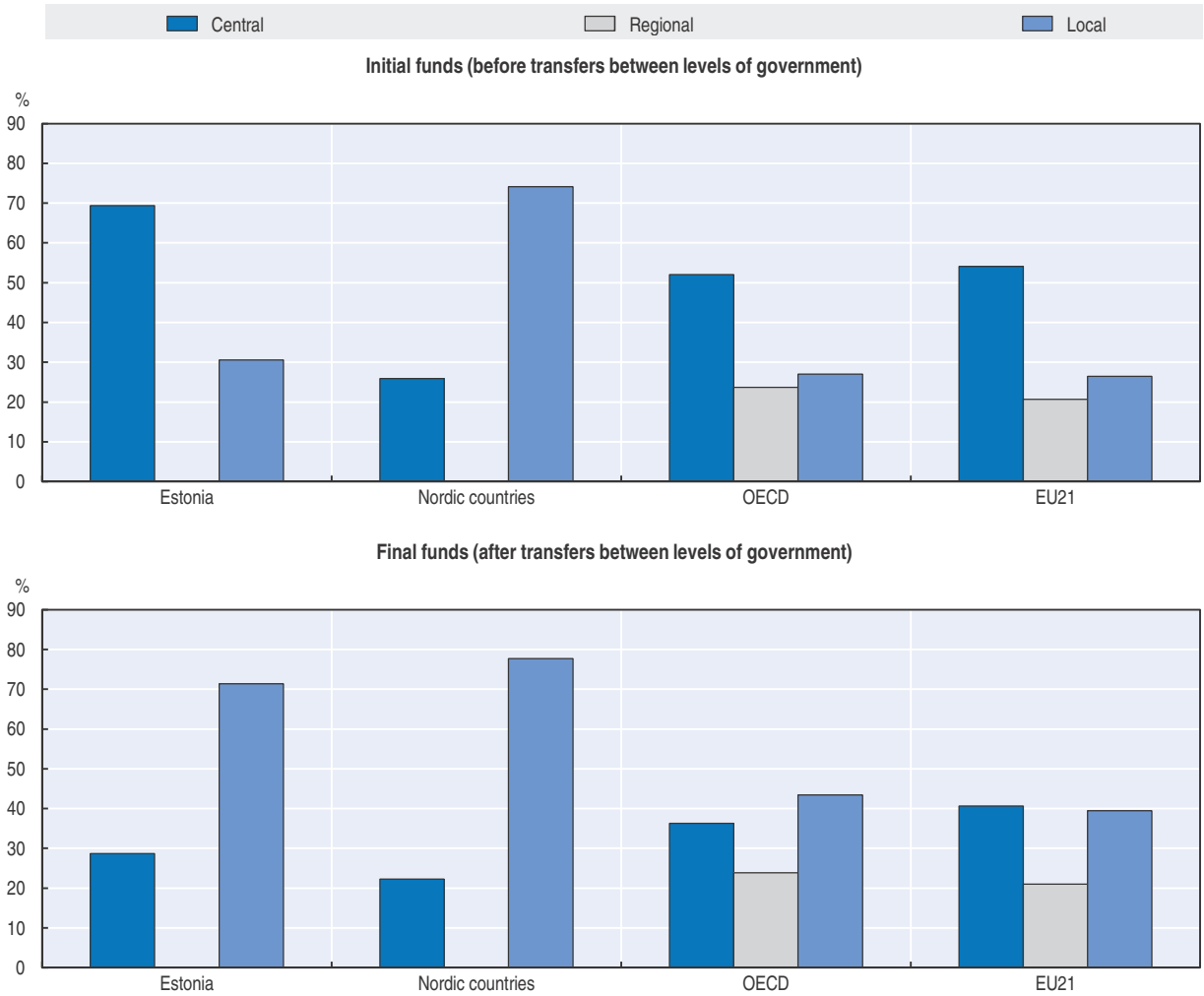
Education is largely responsible for the high share of local expenditure in total public expenditure. This can be seen in Figure 3.5, which shows the sources of public funds for pre-tertiary education, in 2011. In Estonia, local expenditure on education, both as a share of initial funds (before transfers between levels of government) and as a share of final funds (following those transfers), is above the OECD and EU averages. In particular, after transfers between levels of government, as in the Nordic countries, a significant share of public expenditure on pre-tertiary education in Estonia comes from local governments (about 70%).

It is thus fair to say that Estonia has succeeded in combining a relatively conservative posture towards the overall size of government with an admirable commitment to both public education and decentralised governance.

Education constitutes the single largest expenditure of local governments

Education constitutes the single largest expenditure of local governments and has consistently accounted for between 35% and 38% of all local spending. Local governments fully finance pre-primary education – including teachers' salaries – out of their general revenues. For primary, secondary, and special education they receive earmarked grants from the national government to support, for example, the salary costs of educational personnel, school lunches, and textbooks (see below). There are no charges to students for textbooks, school lunches, or student transportation. With the exception of pre-primary education, there are no fees in public schools. Privately-run schools receive public funding on the same terms as public schools and can also charge tuition fees.

Figure 3.5. **Sources of public funds for primary, secondary and post-secondary non-tertiary education, 2011**

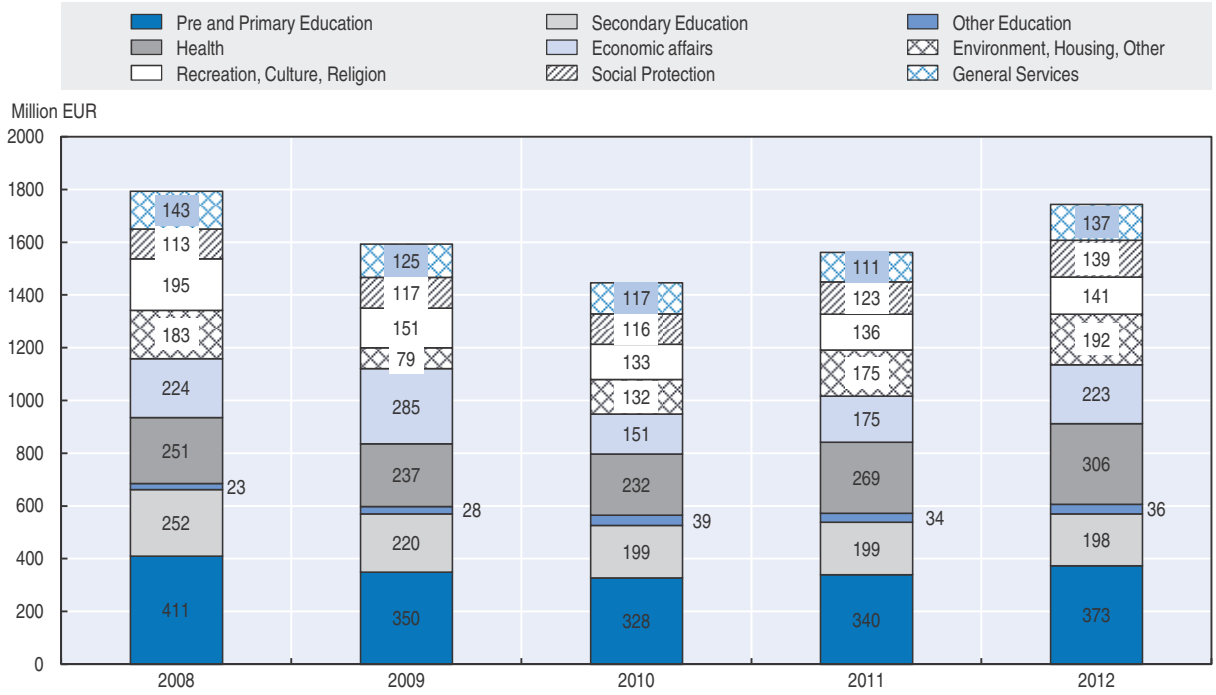


Notes: Nordic average is the unweighted mean for Denmark, Finland, Iceland, Norway and Sweden. EU21 average is the unweighted mean for the 21 countries that are members of both the European Union and the OECD and for which the data are available or can be estimated. The Nordic average for "Initial funds" excludes Denmark and Sweden, for which data were not available. The Nordic average for "Final funds" excludes Sweden, for which data were not available. "Regional" values for Estonia and Nordic countries are nil.
Source: OECD (2014), *Education at a Glance 2014: OECD Indicators*, *http://dx.doi.org/10.1787/eag-2014-en*, Table B4.3.

Earmarked grants from the national government accounted for about 55% of all municipal spending on primary and secondary education in 2012. On a per student basis, these grants have grown from EUR 795 per student in 2006 to EUR 1 376 in 2012 (in nominal terms). Over the same period, total local government spending per student increased from EUR 1 584 to EUR 2 468 (in nominal terms) (Ministry of Education and Research, 2015a).

Between 2008 and 2012 expenditure on pre-primary and primary education accounted for between 20 and 23% of total local spending while expenditure on secondary education accounted for between 11 and 14%. Spending that cannot be accounted for by level of education constituted another 2% to 3% of total local expenditure (see Figure 3.6). pending on pre-primary, primary, and secondary education includes some spending on special education, some of which is provided for in mainstream general schools and some in 13 municipally-run special education schools (SEN schools). Local expenditure on

Figure 3.6. **Composition of local government expenditure, in million EUR, 2008-12**



Source: Authors' own calculations based on Eurostat (no date), *Classification of the Functions of Government (COFOG)* database, *http://ec.europa.eu/eurostat/statistics-explained/index.php/Government_expenditure_by_function*.

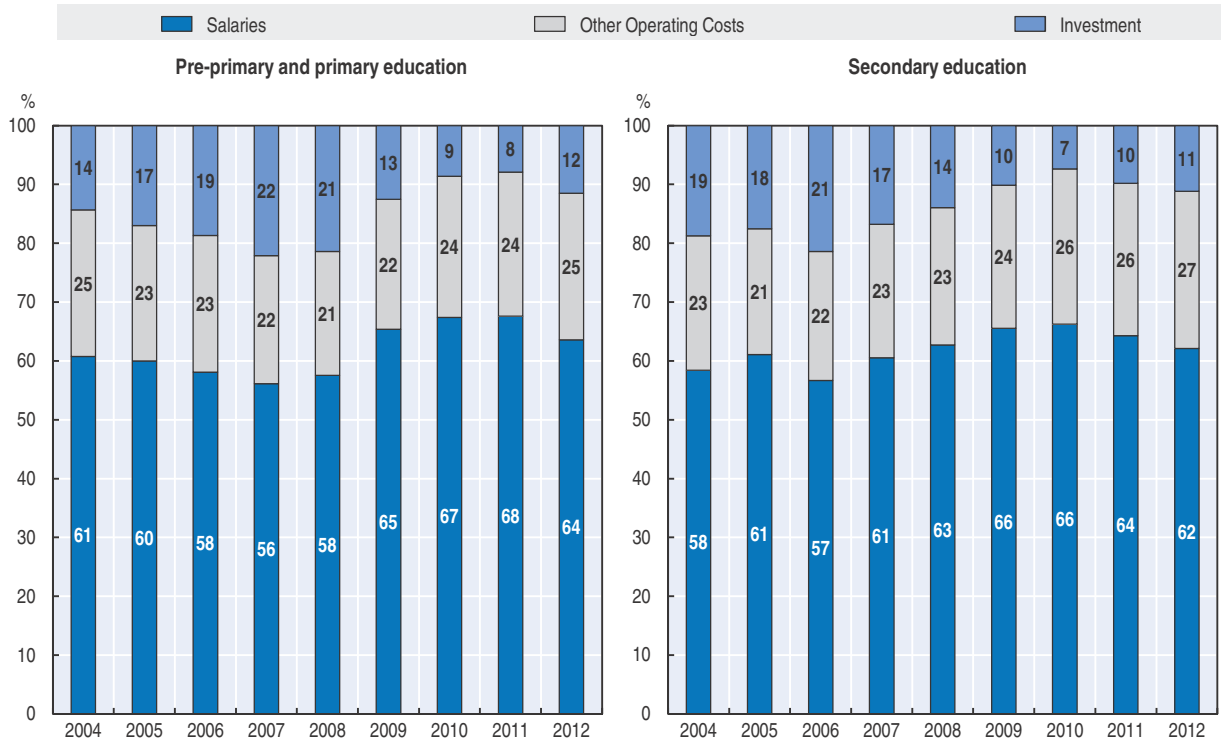
secondary education is typically limited to general education *gymnasiums* because the national government runs all but 3 of the 32 public Vocational Education and Training schools (VET schools). As can be seen from Figure 3.6, local government expenditure, including spending on education declined sharply in the wake of the global economic crisis of 2008-09, but has slowly recovered over the last few years.

As can be seen from Figure 3.7, the share of investment in total local government spending on both primary (including pre-primary) and secondary education has fallen since 2008. In part this decline reflects the fiscal difficulties that came with the economic downturn. But recent increases in the minimum salaries of teachers and the rising costs of maintaining underutilised facilities have also contributed to the decline in investment. Nonetheless, teachers' salaries as a share of total expenditures on primary and secondary education remain on the low end of the international spectrum with most OECD countries devoting more than 70% of education expenditures to salaries. It is also worth adding that the share of investment spending is probably understated (in relation to operating costs) because some large municipalities (e.g. Tallinn) have made extensive use of leasing arrangements to purchase and or refurbish school facilities.

Local governments are highly dependent on grants and transfers from the national government

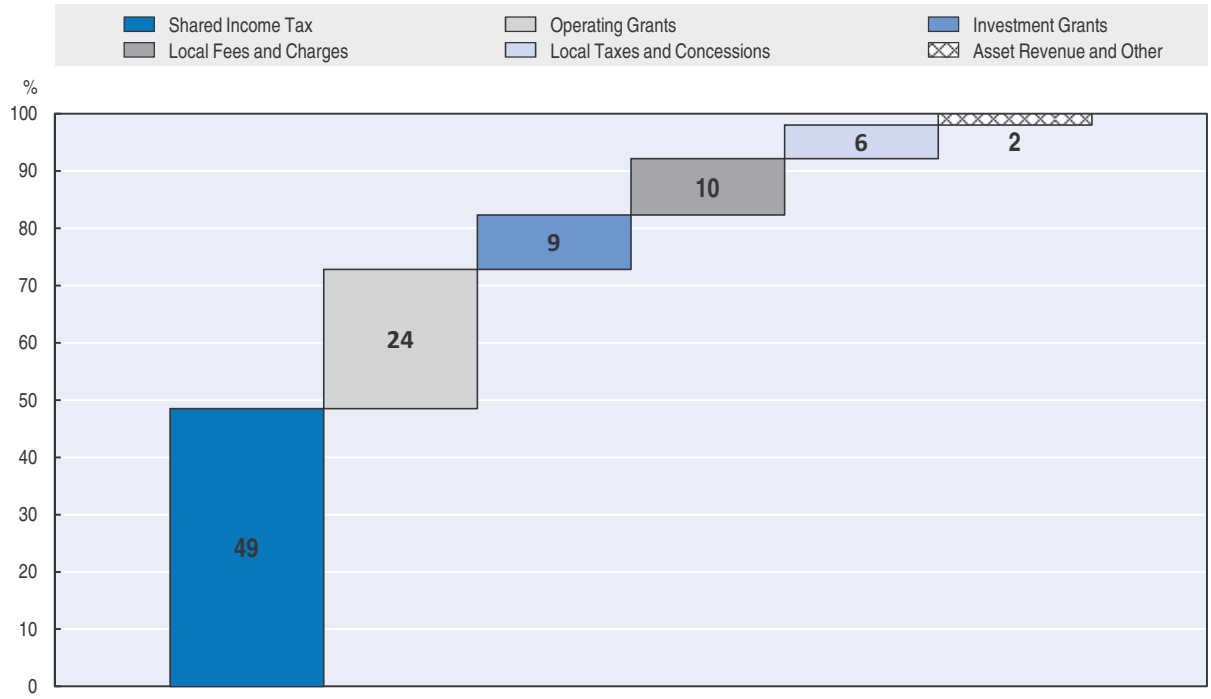
Estonian local governments are very dependent on the national government for their revenues and more than 80% of their budgets come from grants and transfers. This can be seen from Figure 3.8 which shows the composition of local government revenues in 2013. Almost 50% of local revenue comes from shared Personal Income Tax (PIT). Unlike in many countries, however, Estonia does not share with local governments a percentage of the PIT

Figure 3.7. **Composition of local expenditure on pre-primary and primary education, and secondary education, 2004-12**



Source: Authors' own calculations based on Eurostat (no date), *Classification of the Functions of Government (COFOG)* database, *http://ec.europa.eu/eurostat/statistics-explained/index.php/Government_expenditure_by_function.*

Figure 3.8. **Composition of local government revenue, 2013**



Source: Data provided to the OECD review team by the Ministry of Finance.

actually generated in their jurisdictions. Instead, they receive 11.6% of the gross personal income declared by their residents. This form of PIT sharing is very unusual and was introduced in 2004 to protect local governments from changes that parliament might make to the base or the rate of the tax. One important consequence of this tax sharing system has been to increase the amount of PIT that goes to poorer jurisdictions. This is because local governments receive 11.6% of the gross personal income of their residents, even if these residents do not have income above the taxable threshold (i.e. do not pay income taxes). Another important consequence is that now almost 80% of the yield of PIT goes to local governments, up from 54% in 2003 (Trasberg, 2010).

Local governments receive another quarter of their revenues in operating grants from the national government (circa EUR 335 million in 2014). The most important of these grants (circa 60% of the total) is for education and accounts for about 15% of local government revenue (or about EUR 200 million in 2014) (see below for details). Other operating grants include earmarked grants for road maintenance and social service administration as well as a freely disposable equalisation grant. Each of the earmarked grants amounts to about 2% of total revenues. The freely disposable equalisation grant is more important and amounts to about 5% of total revenue or about 20% of all operating grants. It provides local governments with any shortfall between their revenues from shared and local taxes, and a standardised measure of expenditure need based on the average cost of providing a basket of local government services to different age groups in the population (Ministry of Finance, 2010).[1] Finally, local governments can also receive investment grants from the national government. In recent years, these grants have been largely provided for by the EU structural and investment funds and account for about 10% of local revenue.

Taken together, income from shared PIT, operating grants, and investment grants account for the vast majority of local government revenue. Indeed, less than 20% of local budgets come from sources over which local governments have some rate-setting and collection powers.[2] As a result, Estonian local governments have extremely limited fiscal independence and are much more "revenue takers" than "revenue makers". As such, they are more likely to demand additional financial support from the national government to improve services than they are to tax their own citizens.

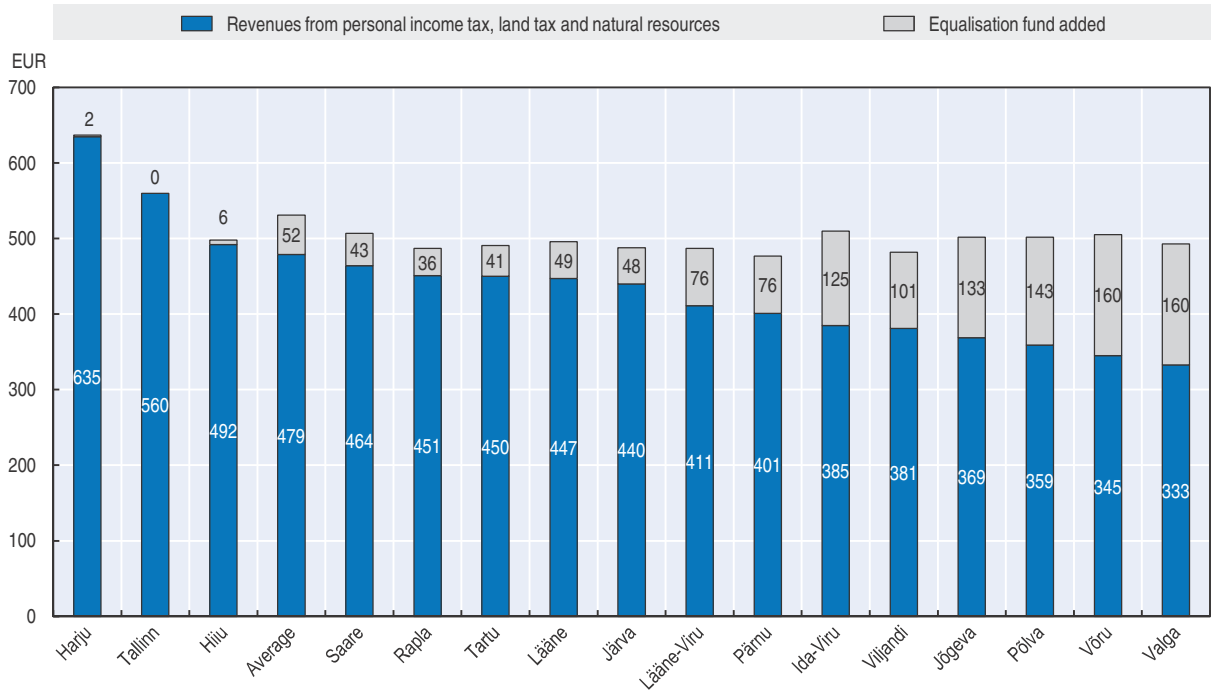
At the same time, the overall operation of the intergovernmental finance system has insured that the per capita revenues of local governments are remarkably similar across jurisdictions with very different socio-economic characteristics. This can be seen in Figure 3.9 which shows the per capita revenues of local governments from shared taxes, own taxes and the equalisation grant aggregated at the county level. Indeed, it is likely that if the other operating and investment grants were included in the picture, local governments in the poorest counties might have per capita revenues substantially higher than those of their richer counterparts.[3]

Funding municipal schools

The education grant to municipalities

The funding for municipal schools comes through a number of different channels. Pre-primary schools, including teachers' salaries, are fully funded by municipal governments from their general revenues, though some urban jurisdictions have received dedicated grants from the state to support investment into the creation of new pre-primary

Figure 3.9. **Allocation of the equalisation fund by county in EUR per capita, 2010**



Source: Data provided to the OECD review team by the Ministry of Finance.

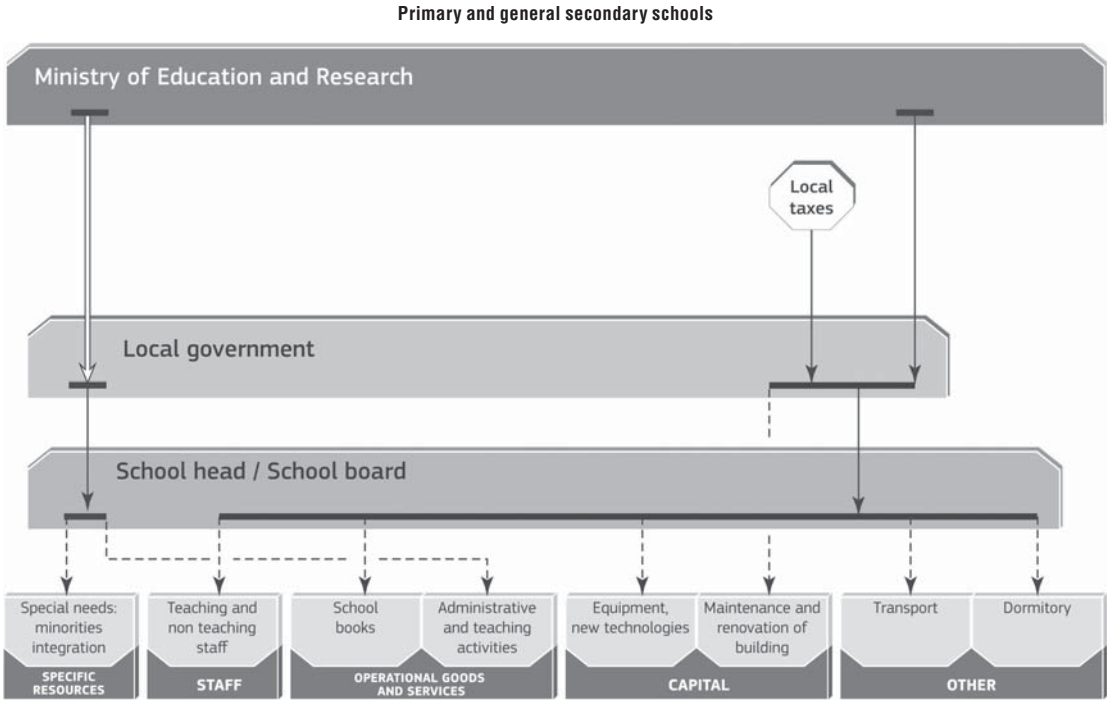
facilities. Municipal primary and secondary schools, as well as municipally-run special education schools receive all their funds from local governments. But local governments receive grants from the national government to support these institutions.

The education grants that municipalities receive from the national government to fund the recurrent costs of primary and secondary education (including special education) are built around four earmarked components: one for study materials (namely textbooks), one for school lunches, one for professional development of both teachers and school leaders and, by far the most important, one for salaries of both teachers and school leaders.[4] The way these components – particularly the one for teachers' salaries – have been calculated, allocated and accounted for in the system has been the subject of continual and often contested adjustment.

The flow of funding from the state to primary and secondary schools via municipalities and the resources that the funding stream purchases are shown in Figure 3.10.

In 1994, an initial effort was made to allocate the grant for teacher salaries on a per student basis. But it was not until 1998 that a genuine per student formula was introduced. This formula was relatively simple and contained first six, and then eight coefficients that adjusted per student payments on the basis of the demographic and socio-economic characteristics of different groups of municipalities. Demographic decline however put increasing pressure on small primarily rural jurisdictions to close schools and in 2008 the formula was radically overhauled to provide greater protection for schools in rural jurisdictions. This revision essentially removed the per capita element of the formula for schools in rural areas, and instead provided financing on a per class basis (Levačić, 2011).

Figure 3.10. **Flow of funding from the state to primary and general secondary schools through municipalities**



Source: European Commission/EACEA/Eurydice (2014), *Financing Schools in Europe: Mechanisms, Methods and Criteria in Public Funding*, *http://eacea.ec.europa.eu/education/eurydice/documents/thematic_reports/170en.pdf*.

In 2012, however, the government returned to the use of a per student formula. As before, the formula is based on assumptions about the number of full time professional staff necessary to teach the programmatic hours of the national curricula at different Year levels. Normative class sizes are used to determine the number of teaching positions to which municipalities with different student populations are entitled. For example, at the basic education level, the formula used in 2015 allocated teachers' salaries on the assumption that the average class should have three possible values: 24 students for municipalities with a student-teacher ratio equal or above 15; 21 students for municipalities with a student-teacher ratio between 7.8 and 14.9; and 10 students for municipalities with a student-teacher ratio of 7.7 or below (see Ministry of Education and Research, 2015a). These assumptions are then adjusted by coefficients designed to reflect the additional teaching time associated with teaching students with special needs and students with Russian as language of instruction (for potential extra classes of Estonian). Once the total number of teaching hours – and hence full-time equivalent (FTE) positions – has been determined for the municipality this figure is then multiplied by a national minimum salary for teachers and increased by 20% to determine a teacher salary budget for the municipality.

As with the initial per student formula, the current formula contains coefficients designed to provide smaller municipalities with additional funding while also pressuring them to consolidate school networks. This is difficult because over half of all municipalities have only one school (see below). The government is also committed to keeping primary

schools close to where the students live. As a result, the formula is constructed more to encourage municipalities to consolidate facilities at the lower secondary school level (Years 7-9) than it is to force the closure of primary schools.

In part for pedagogical reasons, and in part because local governments have been slow to consolidate secondary schools in the face of falling enrolment the national government has recently decided to recentralise general upper secondary education by establishing state-run *gymnasiums* in all county capitals. The national government also expects to eventually take over municipally-run special schools and vocational institutions. It is also requiring that new schools created by municipalities separate lower secondary education from upper secondary education, and the Years 10-12 be taught in separate facilities. As explained in Chapter 2, the plan of the government is that, by 2020, the distribution of responsibilities between the state and municipalities for managing public schools will be as follows: municipalities take responsibility for pre-primary and basic education schools; and the state takes responsibility for *gymnasiums*, VET schools and special education schools.

The salary bill

The national setting of minimum teachers' salaries allows the government to regulate salaries in the sector while giving local governments and school directors a fair amount of autonomy in determining actual pay levels (see also Chapter 5). The national government has adjusted the amount of the education grant to its mandated increases in teachers' salaries while decoupling salary scales from a rigid system of professional advancement (see also Chapter 5).

The average salary of teachers has increased considerably in recent years (see also Chapter 5). This increase has been driven by national government decisions to raise the salary of teachers. But it is only recently that teacher salaries have caught up with the national average. Further increases are anticipated because the national government wants to raise average teachers' salaries to the same level as those of specialist workers with tertiary education in order to improve the attractiveness of the profession, which is reflected in the Estonian Lifelong Learning Strategy 2020. In the years immediately following the economic downturn the salaries of teachers in municipally-run schools dipped below those of their colleagues in state-run facilities (see Figure 5.1) (Ministry of Education and Research, 2015a). Apparently, this was due in part to the fact that some municipalities were not conveying the full value of the education salary grant to schools, and in part because not all school directors were using the salary grant for teachers' salaries.

Local governments have refrained from using their own revenues to increase the salary funds they allocate to schools and the total amount of salary expenditures in the system have remained remarkably close to the size of the salary grant. Average teachers' salaries are also very similar across municipalities, though in some smaller municipalities they are somewhat lower, probably because directors need to employ more teachers to support small classes.

Funding individual municipal primary and secondary schools

Local governments cover the entirety of the costs incurred by their primary and secondary schools and determine the respective budgets. They determine how to allocate funding to individual schools, including that originating from the earmarked grants from the state. The latter cover teacher and school leader salaries, school meals and textbooks, as well as a budget for professional development for individual schools (until 2015 each

municipality used to receive the equivalent of 1% of the "salary grant" for professional development of teachers and school leaders but, since then, this amount is determined on the basis of a per student model). This means that other operating costs such as maintenance, support staff, non-pedagogical staff or heating are covered by the municipalities' own resources. Some investment funds may also come from the general municipality budget.

Tallinn and some other larger jurisdictions have developed their own per student formulas to allocate salary funds and funds for other operating costs to schools. The formulas used to allocate salaries seem to mimic those of the national government. In municipalities with small numbers of schools the allocation of both sets of funds is done largely on a historical basis, with local governments making only marginal adjustments in school budgets from year to year.

Most local governments do not seem to contribute general municipality revenues to the salary funds of schools. They also do not get involved in determining class sizes, staffing patterns or decisions about teachers' actual salaries. Instead, these decisions are left entirely to school directors. This has given school directors a large amount of operational autonomy (see also Chapter 4). At the same time, it has given rise to a form of "dual budgeting" in which local governments do not consider school salary or employment patterns their concern (Levačić, 2011).

Schools are allowed to receive donations and parental contributions, and to earn income from the rental of their facilities. Schools, however, do not have independent bank accounts and these revenues must be turned over to municipalities where they are attributed to the schools' accounts.

Local governments whose students commute to schools in other jurisdictions are required to pay the "importing jurisdiction" the average per student amount that they spend on the non-salary operating costs of their schools. This makes possible inter-jurisdictional school choice. Some municipalities earn considerable income from commuting students.

A few local governments run Vocational Education and Training schools (VET schools) and schools for children with special educational needs (SEN Schools). The per student grants that local governments receive for these schools are calculated using special coefficients. For VET schools, these coefficients differ with the particular type of study being pursued (see also below). For SEN schools they are based on the severity of the disability and the type of curriculum the student is being taught (see below).

Funding pre-primary education

Pre-primary schools are funded by two main sources: the general revenues of municipal budgets and parental contributions. While there are municipal fees for pre-primary schools these are capped at 20% of the national minimum salary (about EUR 70 per month) (Ministry of Education and Research, 2015a). The salaries of pre-primary teachers are typically 20% to 25% below those of teachers in primary and secondary schools (see Chapter 5). Local governments cut pre-primary salaries substantially during the crisis and subsequently were slow to increase them while the national government was aggressively raising the minimum salaries of primary and secondary teachers. Not surprisingly, this has generated a fair amount of salary pressure from pre-primary teachers and recently their trade union has begun to push for substantial pay increases. This pressure is likely to increase over time. Budgets of individual pre-primary schools are decided by individual municipalities.

Funding vocational education and training

As of the 2014/15 school year, the national government runs 30 of the 33 public VET schools. There are five private VET schools, which typically focus on single professions such as information technologies (IT), catering, or hairdressing. VET schools also provide professional training programmes for adults who have completed either basic or general secondary education. Enrolment rates, however, have been falling and dropout rates are high (Ministry of Education and Research, 2015a) (see also Chapter 1). In 2013/14, 19.4% of students enrolled in vocational secondary education (ISCED 3B programmes) and 24.5% of students enrolled in vocational secondary courses based on basic education (ISCED 3C programmes) dropped out (data provided by the Ministry of Education and Research). Over the last ten years, the national government has invested heavily in modernising VET schools and their transformation into effective centres of Lifelong Learning is one of the Ministry of Education's strategic objectives.

The number of VET students who are enrolled in work-based apprenticeship programmes is very small and the financial contribution of the private sector to the system is low. Unlike in many other countries there are no legal requirements for firms or industries to make financial contributions to the state-run vocational system and firms that do not contribute are not taxed to help pay for the system (Ministry of Education and Research, 2015a).

Funding levels in VET are set by the State Commission for Vocational Education that determines which programmes are of highest priority, what they should cost, and how many students should be enrolled in them. The occupational profiles of VET schools are determined in three-year cycles, a decision that involves the national government, representatives of industry, and the schools themselves. Once these profiles have been determined, schools receive a per student payment designed to fully fund the operational costs of their programmes at the assumed level of enrolment (state-commissioned places). Schools are also allowed to enrol additional students on a fee basis, to accept donations, and to earn income from the sale of goods and services. Some VET schools earn as much as 15% of their revenues from the sale of goods and services. This income can be used to pay salaries or to supplement them. VET schools receive the per student payments set during the planning process by the state commission even if the anticipated number of students failed to enrol, or if students drop out. As a result, many of these institutions are being funded on the basis of their historical costs.

Funding special schools

State funding for state SEN schools is based on a per student formula that is designed to cover the full operating costs of the institution. State funding for municipal SEN schools follows the same principles as the funding of municipal mainstream schools, i.e. it covers salaries of teachers and school leaders, study materials, school meals and professional development for teachers and school leaders. Other operational costs are covered by municipalities. In both the cases of state and municipal SEN schools, the coefficients in the formula are designed to reflect the severity of the disability and the type of curriculum the student is being taught.

Funding of privately-run schools

Privately-run schools receive public funding on the same terms as public schools and can also charge tuition fees. They can also return profits to owners. The decision to provide private schools with public funds is designed to increase the amount of school choice in the education system. The national government provides private schools with a grant for teachers' salaries that is calculated in the same way as it is for municipal public schools. Since 2011, municipal governments are also required to provide private schools in their jurisdiction with the average amount of per student funding they provide to municipal schools for their non-salary operating costs (Ministry of Education and Research, 2015a). Recently, some municipalities have stopped paying their portion of these costs to private schools and the matter has been taken to the courts.

EU structural and investment funding

Since Estonia's accession to the European Union, funds from the European Regional Development Fund (ERDF) and the European Social Fund (ESF) have played an important role in the education sector and in recent years have accounted for about 10% of total expenditure on education, including Research and Development (Ministry of Education and Research, 2015a).

For both the 2004-06 and 2007-13 periods the bulk of the funding from both Funds were focused on modernising VET institutions, improving tertiary education and supporting research and development, notably within the knowledge triangle. With respect to the modernisation of VET schools, the ESF was used to support curriculum development, while the ERDF funded infrastructure improvements.

The Operational Programme for Cohesion Policy Funds 2014-2020 (Ministry of Finance, 2014a) gives a prominent role to education as one of 11 Thematic Priority Axes under the designation "Qualifications and skills meeting the needs of society and the labour market". This priority axe contains three investment priorities and a number of specific objectives as described in Table 3.4. It is planned that, during this period, the European Social Fund will contribute about EUR 195 million (to which a national counterpart of about EUR 34 million will be added) to fund investment priorities 1 and 3 while the European Regional Development Fund will contribute about EUR 218 million (to which a national counterpart of about EUR 38 million will be added) to fund investment priority 2 (school network) (Ministry of Finance, 2014a). This Operational Programme was developed to respond to priorities identified in the National Reform Programme "Estonia 2020" as described in the "Partnership Agreement for the use of European Structural and Investment Funds 2014-2020" established with the European Commission (Ministry of Finance, 2014b).

Targeted policies and support to specific groups of students

There are a number of programmes designed to support specific needs of students. These include programmes to provide additional support for immigrant students to learn Estonian and to follow individualised curricula; the Language Immersion programme (*Keelekümblus*) which provides additional Estonian language instruction for Russian-speaking students in pre-primary school and basic school, covering 6 000 students and 1 000 teachers; and programmes that provide housing and travel allowances to VET and other commuting students based on socio-economic need.

Table 3.4. **Investment priorities and specific objectives for education in the Operational Programme for Cohesion Policy Funds 2014-2020**

Investment priority	Specific objectives
Investment priority 1: Reducing and preventing early school-leaving and promoting equal access to good quality early-childhood, primary and secondary education including formal, non-formal and informal learning pathways for reintegrating into education and training. (Financed by the European Social Fund – ESF)	**Specific objective 1:** Reducing school and education drop-out rates and supporting career choices through high-quality educational support services. **Specific objective 2:** Improving the teaching competence of teaching staff, principals and youth workers in order to implement a teaching approach that supports the personal and social development and develops the learning skills, creativity and entrepreneurial ability of each learner at all levels and in all forms of education. **Specific objective 3:** Modern and innovative study materials have been introduced.
Investment priority 2: Investing in education, training and vocational training for skills and lifelong learning by developing education and training infrastructure. (Financed by the European Regional Development Fund – ERDF)	**Specific objective 4:** A general education school network that takes into account demographic changes, is based on the principles of inclusive education and ensures equal access to high-quality education in all regions of Estonia.
Investment priority 3: Enhancing equal access to lifelong learning for all age groups in formal, non-formal and informal settings, upgrading the knowledge, skills and competences of the workforce, and promoting flexible learning pathways including through career guidance and validation of acquired competences. (Financed by the European Social Fund – ESF)	**Specific objective 5:** Studies in vocational and higher education institutions are more in line with labour market needs and support entrepreneurial ability. **Specific objective 6:** Increased share of adults with professional and occupational qualifications, improved key competences for lifelong learning, and improved employability.

Source: Ministry of Finance (2014a), Operational Programme for Cohesion Policy Funds 2014-2020, *www.struktuurifondid.ee/public/EE_OP_EN_2_12_2014.pdf*.

Some additional financial support is also allocated through the per student formula to municipalities with large numbers of schools whose primary language of instruction is Russian (e.g. in Ida-Viru County), and recently some special programmes have been put in place to provide additional training and financial support to teachers in Russian language schools.

Funding of school infrastructure

Both the national government and local governments have recently made impressive investments in school infrastructure. As noted above, the national government has used EU structural and investment funds to modernise VET facilities and is currently building a number of new *gymnasiums* in county capitals. It has also supported the infrastructure investments of local governments in pre-primary schools and general education schools with dedicated investment grants.

For their part, local governments have maintained high investment rates in the sector. Major cities have also entered into public-private partnerships to renovate or build school facilities. In these partnerships private companies undertake the necessary investments at their own cost and then lease back the facilities to local governments who eventually become their full owners. Indeed, because expenditures on leases are considered operating expenses, these arrangements lead to an underestimation in the official statistics of how much new investment local governments have supported.

School autonomy to manage budget

As indicated above, school directors have wide operational autonomy with regards to determining staffing patterns and teachers' salaries (see also Chapter 5). They can split classes, hire extra staff, and increase salaries so long as all full-time teachers are receiving

at least the state-mandated minimum salary. They also can rent school facilities and solicit donations and parental contributions (see also Chapter 4). Schools however, do not have their own bank accounts and all expenditures are paid for by their owners.

Procurement of services

Most local governments have centralised the procurement of some school services such as catering, building repairs, and the purchase of heating fuel and other school supplies. But rather than entering into one-size-fits-all contracts with the private providers, municipalities have developed more sophisticated agreements that guarantee school directors some range of choice, for example in choosing school meal plans.

State-run institutions conduct the procurement of services independently (i.e. per institution) unless joint procurement agreements are made by the central purchasing body. The Ministry of Education and Research's State Assets Department co-ordinates procurement activities which refer to state real assets and ensures the purposeful and efficient use of assets. All major decisions about the repair, improvement, and disposition of assets in the control of state-owned schools are supervised by the Ministry.

Budget planning

Unlike many countries, Estonia has taken important steps to integrate its annual budgeting processes into longer-term strategic frameworks at all levels of governance. By law, the national government, local governments and indeed schools must have Strategic Development Plans. For local and national governments, these plans must be linked with four-year medium-term expenditure frameworks (MTEF). These frameworks establish the parameters around which annual budgets are made, but are then adjusted in light of those budgets.[5]

At the national level the most important strategic document is the National Reform Programme "Estonia 2020" (Government of Estonia, 2014), adopted in the context of the Europe 2020 strategy. It identifies 17 major challenges facing the country and divides them into four basic fields, one of which is education. The priorities in education are then further defined by the Estonian Lifelong Learning Strategy 2020, which in turn serves as the platform for financial planning in the sector between 2014 and 2020 (see Chapter 1). Strategic priorities and goals are expressed in concrete financial terms in the Ministry of Education and Research's four-year medium-term expenditure framework. The strategic priorities and goals are implemented through nine programmes.[6]

This framework is subject to inter-ministerial discussion and debate before being integrated into the government's broader MTEF. In March of every year the Ministry of Finance uses economic forecasts and the government's MTEF to give all line ministries a budget ceiling for the following year. By April, line ministries must fit their priorities into these ceilings in accordance with their stated objectives and adjust their MTEFs accordingly. Negotiations between high level civil servants produce further modifications in each ministry's budget and in September the government submits its general budget proposal for the next fiscal year to Parliament for debate. Local governments are also required to align their annual budgets with both four-year expenditure plans, and longer-term Strategic Development Plans.

School directors are responsible for developing school budgets. As at the national level, most local governments operate according to well defined budget calendars and in the spring provide school directors with budget ceilings for the next fiscal year. These figures are then adjusted in the fall when enrolment becomes clearer. In municipal schools, school budgets are reviewed by democratically elected boards of trustees composed of parents, teachers and students before receiving final approval by the local government (see Chapters 1 and 4). In state-run schools, budgets are also reviewed by boards of trustees or advisory bodies (in VET schools), but these boards contain not only teacher and parent representatives, but external experts and, for VET schools, representatives of industry. The Ministry of Education and Research grants final approval for the budgets of state schools.

Monitoring, transparency and reporting

Oversight over the use of resources in the education sector is exercised both internally and externally, and by different institutions at different levels of the system. Municipal governments are legally required to have internal audit commissions, as are all state agencies. These commissions are required to make judgments about whether the institutions they are responsible for examining have complied with the law as well as whether they are spending money efficiently and effectively. Local governments are also periodically required to commission external audits of their managerial and financial systems.

The Ministry of Finance has the right to audit the accounts of local governments and schools, as well as those of all state agencies. When theses audits concern local government expenditures funded by their general budgets, then the audits can only be for legal compliance. When, however, they concern expenditures made from earmarked grants the Ministry of Finance has the right to assess both legal compliance, and broader questions of purposefulness, effectiveness and efficiency. The same rules apply for the National Audit Office. This Office conducts risk-based assessments of the public sector and plays a substantial role in controlling the finances of both local governments and state agencies, including those in the education sector.

The National Audit Office's local government department employs about 30 people and conducted its last comprehensive audit of local government finances in 2007. It will conduct another one in 2015. Because of the internal and external auditing requirements that already exist for the local governments the Office avoids conducting basic compliance audits for them. Instead, the Office typically conducts problem-solving audits on sample populations of about 15 local governments.

The Office also has a small, three-person team dedicated to auditing the education sector. Over the last five years this team has conducted audits of tertiary education, VET and SEN schools and state activities designed to promote research and development. One of its most recent audits concerned the use of the education grant by local governments and schools. The mixing of local and national government funds both by level of education (e.g. pre-primary and primary education) and by function (e.g. salaries for support staff are not covered by the education grant) make these audits difficult.

But the National Audit Office found that not all national government support was being spent as intended, particularly with respect to teachers' salaries (National Audit Office, 2007). Some local governments were continuing to pay the salaries of professional support staff from the grant after the Ministry defined these salaries as a local

responsibility in order to encourage schools to procure these support services from the new regional counselling centres. Some local governments were also using income earned by schools for their own purposes. To correct some of these problems new codes were introduced into the national budget classification scheme and the situation seems to have improved. Nonetheless the Office's next major audit of local governments will also focus on school finance.

State oversight over the educational process is the responsibility of the External Evaluation Department of the Ministry of Education and Research (see Chapters 2 and 4). But this responsibility is shared with county-level school inspectors who are employees of the Ministry of the Interior (see Chapter 4). Since 2006, the basic model of school evaluation has been changed from one based on cyclical external evaluations, to one based on school self-evaluation. This shift means that schools are no longer visited regularly by inspectors on specified schedule. Instead, the External Evaluation Department sets priorities for thematic evaluations of different levels of the school system, and different problems within it, and then works with the inspectors to execute the evaluations and develop improvements. The Ministry estimates that about 10% of all schools are visited for thematic evaluations every year (see Chapter 4).

The Ministry expects that the new regional counselling centres co-ordinated by the Innove Foundation will play an ever greater role in helping schools conduct self-evaluations in accordance with a quality management approach and in providing professional development services to schools. Towards this end the Ministry has created a publicly available list of educators and directors who are qualified to facilitate the self-evaluation process (officially trained advisors, see Chapter 4). It also expects to make greater use of external standardised student assessments to identify schools at risk. Not surprisingly, there is both institutional tension and overlap between the county-level inspectors working for the Ministry of Interior on the one hand, and the Ministry of Education and Research and the regional counselling centres on the other. Schools, teachers and parents often address complaints about the educational process to the county-level inspectors when the Ministry of Education and Research would prefer to see these complaints directed to the new regional counselling centres.

Oversight over the educational system is also exercised by the Chancellor of Justice. This Office acts as an independent ombudsman and investigates complaints about whether public services are being provided in accordance with the constitutional principles of fair and equal treatment. Recently, much of its activity in the education sector has concerned complaints about the shortage of places in pre-primary schools, and its ruling has prompted plans for the national government to support pre-primary school development in Estonia's four largest municipalities.

Estonia has invested heavily in the public sector use of informational technologies (IT) and has developed an impressive network of databases to track taxation, public sector expenditure, the labour market, social welfare services, and the education system. Of particular importance is the Estonian Education Information System (EHIS, *Eesti Hariduse InfoSüsteem*) which has comprehensive registers for teachers; students; educational institutions; curricula and licences; and educational research. Much of the data contained in the system are available to the general public (*www.ehis.ee*).

As far as the review team could tell, Estonian educators are committed to their profession despite the fact that they feel it is not valued in society (see Chapter 5). Similarly, it also seems that a significant number of Estonian citizens are actively engaged in their children's schools, namely through boards of trustees, despite the fact that along most other dimensions Estonian citizens demonstrate levels of civic (dis)engagement that are similar to those of other post-communist countries (Howard, 2003). Both professional commitment and citizen engagement constitute important pillars of Estonia's system of educational accountability.

Strengths

There is a considerable effort in resourcing education while keeping a small public sector

A particularly good indicator of a country's relative effort in resourcing education is the amount spent per student as a percentage of GDP per capita compared with other countries, since this takes account of differences in per capita GDP. From Table 3.5 it can be seen that Estonia spends about the same proportion of GDP per capita than the OECD average on primary and lower secondary education and two percentage points more on upper secondary education. However, it spends considerably less, as a proportion of GDP per capita, on pre-primary education. This might be partially explained by low teacher salaries in pre-primary education. At the same time, Estonia has kept the overall size of the public sector smaller than most of its counterparts in the European Union. Hence, the commitment to both fiscal prudence and public education is rather admirable.

Table 3.5. **Annual expenditure per student by educational institutions relative to GDP per capita, Estonia and comparator countries, 2011**

	Pre-primary education (3 years and older)	Primary education	Secondary education		
			Lower secondary education	Upper secondary education	All secondary education
Estonia	11	23	26	29	28
Finland	15	21	32	22	25
Latvia	22	25	25	25	25
OECD average	21	23	26	27	26
EU21 average	20	22	26	27	26

Notes: EU21 average is the unweighted mean for the 21 countries that are members of both the European Union and the OECD and for which data are available or can be estimated.
Source: OECD (2014), *Education at a Glance 2014: OECD Indicators*, *http://dx.doi.org/10.1787/eag-2014-en*, Table B1.4.

Good levels of public spending on education relative to the country's resources has allowed Estonia to provide free textbooks, school lunches, and relatively easy physical access to primary and secondary schools. It will now also make possible tuition-free tertiary education. Low cost education services, universal school meals and textbooks contribute to equity in the system by avoiding the stigmatisation of students from underprivileged households or groups.

In addition, Estonia has an extensive network of SEN schools and programmes that ensure that children with special needs have access to public education. Estonia has also made major investments in Vocational Education and Training and is clearly committed to developing an effective system for Lifelong Learning.

Education performance is high given the current levels of education investment

As measured by international standardised student assessment results, the Estonian education system performs well and is reasonably efficient despite low student teacher ratios. Indeed, the results of Estonian secondary students on the 2006, 2009, and 2012 PISA surveys demonstrate steady improvement across all measures. Estonian students are ranked among the best in Europe (and the world) in math (4th and 11th), reading (4th and 11th) and science (1st and 4th) (see also Chapter 1). This is in a context where public investment on education, relative to national resources, is only around the OECD average.

Moreover, differences in scores between Russian-speaking students (25% of the total) and native Estonian speakers has fallen, between 2006 and 2012, from 66 to 36 points in reading, 40 to 31 in mathematics, and 43 to 36 in science (with 40 points representing about a year of academic study). The number of students repeating years has fallen to less than 1% and only 4% of students do not continue their studies after completing Year 9. However, the share of 18-24 year-olds who have left the education system after completing only basic education was in 2014 at 11.4%, hence above the EU average of 11.1% (Eurostat Labour Force Survey data, 2015). Overall, there has been progress in improving performance and equity in the system with public investment in education only around the OECD average (relative to the country's resources) (see also Chapter 1).

The operation of intergovernmental finance provides a good foundation for the decentralised governance of schools

The overall operation of the intergovernmental finance system has provided local governments with adequate, predictable, and equitable revenues, thus establishing a strong foundation for the decentralised governance of the country's schools. In particular, the systems for equalisation and Personal Income Tax (PIT) sharing have worked to ensure that even small, rural and/or economically disadvantaged municipalities have been able to modernise their schools, increase pre-primary enrolment, maintain easy physical access to schools with low student/teacher ratios and provide afterschool educational activities through non-school institutions. Ceilings on pre-primary fees have also made the system affordable for most households.

The largest single expenditure that local governments make from their general revenues goes to pre-primary education. And their single largest source of general revenue is a share of PIT. So PIT sharing is closely tied to the ability of local governments to provide pre-primary education. The fact that local governments have been able to raise the average rate of pre-primary enrolment to figures above 90% of all 3-6 year-olds is due in large part to Estonia's generous PIT sharing regime, and in particular to the fact that it shares not the yield of the tax, but 11.6% of its total base – a system that provides more money to poorer municipalities than would otherwise be the case. However, as it has been pointed out above expenditure per student in pre-primary education remains low by international standards, which is partly explained by the low salaries of pre-primary teachers.

Local governments have demonstrated an impressive commitment to improve their school systems and over the last ten years have consistently devoted between 10% and 20% of all education spending to investment (these high investment rates have been to a large extent supported by EU structural and investment funds). Local governments have also actively used non-school cultural institutions – so called Hobby Schools – to provide students with a broad range of afterschool programmes in the arts and sciences.

A number of features of the funding approach facilitate the achievement of policy objectives

Though teachers' salaries remain relatively low, the national government has significantly raised them over the last few years (see Chapter 5). Importantly, it has done this by increasing the size of the earmarked education grant that local governments receive for teachers' salaries in line with its own decisions to raise their minimum salaries, thus ensuring that the cost of national government policy decisions are not fully imposed on local governments.

The ability to align the education grant with the number of programmatic hours taught at a given level of instruction has made it possible to adjust the grant to meet both changes in curricula and per class norms. The calculation of the grant also includes coefficients for students with special needs attending both SEN schools and mainstream schools. In theory, these coefficients should help facilitate the integration of students with less severe disabilities into mainstream schools.

Comprehensive funding for school textbooks, school lunches and teacher professional development of teachers and school leaders have been provided through separate earmarked grants, making it easy for the national government to ensure that they have been spent in accordance with their specified purposes.

The funding system has now developed new provisions to ensure greater access to counselling services. These services will now be provided through regional counselling centres (also called Pathfinder centres), relieving (often very small) schools of the costs of trying to maintain support personnel in-house. The new regional counselling centres should also eventually improve the quality and availability of in-service training programmes for teachers.

Jurisdictions with large numbers of schools (e.g. Tallinn) have developed clear and transparent formulas to allocate to schools funds for their operating costs other than teachers' and school leaders' salaries. These formulas have facilitated the operational autonomy of schools and have allowed school directors to both save money, and reallocate it across budget lines – at least on an annual basis.

The system of financing for VET schools is flexible and can be adjusted to the needs of the labour market. The adjustment takes place through the involvement of representatives of different economic sectors in the education planning process at the national and school levels. There has been significant investment in improving the government's ability to monitor the labour market, creating the potential for making the VET planning process more evidence-based. New VET professional standards will also increase the flexibility of the vocational school system by better integrating more general educational elements of the programme into vocational training. This should also improve the efficiency of the system. VET schools can also generate a significant amount of freely disposable own revenues.

There has been some adjustment of the school network to the demographic decline

Declining enrolment has put increasing pressure on both the national government and local governments to rationalise resource use across the school system (see Chapter 1). Despite frequent and sometimes inconsistent changes in the formula that the national government has used to allocate the education salary grant to local governments, the formula has nonetheless exerted pressure on local governments to rationalise their school networks in the face of declining enrolment.

There has been some adjustment of the school network to the demographic decline. As can be seen from Table 3.6, between 2005/06 and 2013/14, in general education, school owners have responded to the 22.1% decline in student enrolment by closing 9.5% of their schools (57). This has mostly been undertaken by municipalities as the number of state-run facilities has stayed about the same (from 31 to 30 schools) and the number of private schools has actually increased from 33 to 47. Table 3.7 extends this information to other levels and types of education and includes teacher numbers, but for a shorter period of time (2008/09 and 2013/14). It shows that, in this period, in general education, the 8.2% decrease in student numbers (10% in the municipal sector) was accompanied by a decrease of 4.6% in the number of schools (7.7% in the municipal sector) and of 5.7% in the number of teachers (7.9% in the municipal sector). For the same period, there was a significant 21.3% drop in the number of upper secondary students in vocational education (21.9% in the dominant state sector). This was accompanied by a decrease of 11.1% in the number of schools (6.5% in the state sector) and of 21.8% in the number of teachers (13.0% in the state sector). The gap between the fall in enrolment and the decline in both teacher employment and the number of schools is not surprising because closing schools and putting teachers out of work is among the most difficult political decisions that democratically-elected officials ever face – at any level of governance. Overall, local governments and the state have used their ownership powers over schools to make some adjustment to their school networks to meet the challenges of the demographic decline.

When faced with a similar decline in enrolment (and a similarly ambiguous policy environment with respect to who is really responsible for paying teachers' salaries), Polish local governments responded by reducing the number of schools faster than they reduced the number of teachers. This is different from the pattern in Estonia. Polish local governments, however, have proved much more willing to use their general budget revenues to pay for the "extra" teachers, perhaps because education is regarded (not entirely correctly) as a local government own function, and because Polish local governments raise a higher share of their revenues from local fees, charges and taxes (Herbst et al., 2012).

Table 3.6. **Number of students and schools, general education, 2005/06 and 2013/14**

	2005/06	2013/14	% change
Students – total	**173 822**	**135 392**	**-22.1**
State	3 794	3 862	1.8
Municipal	165 636	124 657	-24.7
Private	4 392	6 873	56.5
Schools – total	**601**	**544**	**-9.5**
State	31	30	-3.2
Municipal	537	467	-13.0
Private	33	47	42.4

Notes: Data refer to "stationary studies" (aimed at individuals compelled to attend school or whose learning is both a full-time activity and the related school-level instruction is more important than independent learning). Data include all general education, including adult upper secondary schools and special schools.
Source: Ministry of Education and Research (2015b), *Haridussilim* (The Eye of Education), *www.haridussilm.ee/*, based on the Estonian Education Information System (*Eesti Hariduse InfoSüsteem*, *www.ehis.ee*).

Table 3.7. **Number of schools, students and teachers, 2008/09 and 2013/14**

		2008/09	2013/14	% change
Pre-primary education	**Number of schools**			
	Municipal	591	595	0.7
	Private	46	57	23.9
	Total	**637**	**652**	**2.4**
	Number of students			
	Municipal	60 019	65 879	9.8
	Private	2 091	2 805	34.1
	Total	**62 110**	**68 684**	**10.6**
	Number of teachers (FTE)			
	Municipal	6 902	7 188	4.1
	Private	273	312	14.3
	Total	**7 175**	**7 500**	**4.5**
General education	**Number of schools**			
	State	30	30	0.0
	Municipal	506	467	-7.7
	Private	34	47	38.2
	Total	**570**	**544**	**-4.6**
	Number of students			
	State	3 294	3 862	17.2
	Municipal	138 502	124 657	-10.0
	Private	5 723	6 873	20.1
	Total	**147 519**	**135 392**	**-8.2**
	Number of teachers (FTE)			
	State	563	585	3.9
	Municipal	11 350	10 455	-7.9
	Private	540	699	29.4
	Total	**12 452**	**11 739**	**-5.7**
Vocational education	**Number of schools**			
	State	31	29	-6.5
	Municipal	3	3	0.0
	Private	11	8	-27.3
	Total	**45**	**40**	**-11.1**
	Number of students			
	State	15 535	12 133	-21.9
	Municipal	2 760	2 369	-14.2
	Private	272	119	-56.3
	Total	**18 567**	**14 621**	**-21.3**
	Number of teachers (FTE)			
	State	1 340	1 166	-13.0
	Municipal	233	213	-8.6
	Private	250	48	-80.8
	Total	**1 824**	**1 427**	**-21.8**
All levels	**Number of schools**			
	State	61	59	-3.3
	Municipal	1 100	1 065	-3.2
	Private	91	112	23.1
	Total	**1 252**	**1 236**	**-1.3**
	Number of students			
	State	18 829	15 995	-15.1
	Municipal	201 281	192 905	-4.2
	Private	8 086	9 797	21.2
	Total	**228 196**	**218 697**	**-4.2**
	Number of teachers (FTE)			
	State	1 903	1 751	-8.0
	Municipal	18 485	17 856	-3.4
	Private	1 063	1 059	-0.4
	Total	**21 451**	**20 666**	**-3.7**

Notes: FTE = Full-time equivalent. Data refer to "stationary studies" (aimed at individuals compelled to attend school or whose learning is both a full-time activity and the related school-level instruction is more important than independent learning). Data include all general education, including adult upper secondary schools and special schools. Data on teachers refer to full-time equivalents. Data for vocational education refer to vocational studies in secondary education.
Source: Ministry of Education and Research (2015b), *Haridussilim* (The Eye of Education), *www.haridussilm.ee/*, based on the Estonian Education Information System (*Eesti Hariduse InfoSüsteem*, *www.ehis.ee*).

As owners of schools, municipalities have also adjusted their school networks in ways that cannot be seen in the gross numbers on school closure. For example, many municipalities have reduced the number of upper years in existing schools in order to leave lower years (1-3, 1-6) closer to students' homes, while trying to consolidate higher years in one or two facilities.

The current formula for allocating education salary grants to local governments provides some incentives for multiple municipalities to work together to consolidate the teaching of lower secondary education into a single facility: the municipality that closes Years 7-9 will continue to receive funding for the students it loses for the next few years, while the municipality that takes these students in turn will receive whatever coefficient of support that was being applied to these students before consolidation. Also, as of 2015, the coefficients that will be used to allocate both the education salary grant and the

equalisation grant will be stated in law and not subject to annual changes. This is intended to provide local governments with a more stable financial platform for planning their school networks.

The payment of the per student amount of the non-salary operating cost of their schools by municipalities which send their students to a receiving municipality also plays an important role in facilitating network adjustment by ensuring that importing municipalities have incentives to take in students from other local governments. It however, also makes it harder for municipalities with smaller numbers of students to maintain reasonable class sizes because they inevitably lose some students to larger, neighbouring municipalities. This is particularly true for local governments that border on big cities where the possibilities for students to travel to schools outside of their home jurisdiction are greater because of public transport, or because parents are commuting to work.

The national government is committed to rationalise the upper secondary school network

The national government is committed to rationalising the network of upper secondary schools by creating a new state-run *gymnasium* in every county capital. The objective is that these new state-run *gymnasiums* will not only make the system more efficient, but also make it possible to provide all upper secondary school students with quality instruction. A significant share of EU structural and investment funds earmarked for education during the 2014-20 period will be used for this purpose (see Table 3.4) (Ministry of Finance, 2014a).

The national government is providing some incentives for local governments to consolidate their upper secondary school networks. Local governments that reorganise their school networks by reducing or eliminating the number of schools that provide upper secondary education will be eligible for special investment grants. The national government will also fully cover the cost of transportation of students who commute from another municipality to attend one of the new state-run *gymnasiums*. Investments will also be made to improve dormitories for commuting students.

A number of policy features facilitate school choice

The provision of public funding to private schools has increased school choice, encouraged the growth of private involvement in the education system, and increased the diversity of institutions from which innovative pedagogical strategies can be drawn. Also, the requirement that local governments whose students attend schools in other municipalities pay those municipalities the average per student non-salary operating costs of their schools has facilitated school choice and network rationalisation by ensuring that money follows students to where they attend school.

Schools have considerable autonomy over the use of their funding

The Education Grant for teachers' salaries (for municipal schools, distributed to individual schools via the municipalities) has given school directors large amounts of operational autonomy with respect to salary and employment decisions. School directors have a high degree of operational autonomy and control over school budgets including the ability to hire and dismiss teachers, set their salaries (above the national minimum), earn

and retain own income (within the budget year), and pay for in-service teacher professional development (with a earmarked budget provided by the state), despite the fact that accounting functions are at the municipal level.

All public schools are allowed to accept donations and to retain fees earned from renting assets. Some VET schools also generate as much as 15% of their revenues from the sale of goods and services produced by their students. Donations are typically registered in school accounts and referenced in both the school budget and school development plans (both of which are publicly available), though perhaps more so for municipal schools than state-run facilities. Most local governments seem to have established reasonable rules to divide income asset between schools (e.g. 75%) and their own budgets (e.g. 25%). In state-run facilities, if rental fees are above operational costs and refer to a long-term rental, the fee is transferred to the Ministry of Finance; if rental is one-off and only covers operational costs, the fee is transferred to the school.

Budget planning for education is strategic

At the national level, annual budgeting processes are embedded in a strong legal framework and linked in practice to strategic documents and medium-term expenditure frameworks that connect spending decisions to priorities. Actors at all levels of the system share a common understanding of these priorities as well as the basic budget decisions that are supposed to make them achievable. Linkages between strategic and budget frameworks help to provide governments with a clearer picture of where public finances are being spent, to allocate resources to policy priorities, and to make it easier to track spending against the achievement of policy outcomes (OECD, 2011).

Though there is always room for improvement (see OECD, 2011), budget planning seems to be well organised and reasonably well linked to policy priorities. Budgetary resources have tracked policy decisions to increase teachers' salaries; improve VET education; create separate, state-run upper secondary schools; expand the capacity of pre-primary schools, and consolidate the provision of career, psychological, and lifelong learning counselling.

Many countries have laws that require that annual budgets be linked to medium-term expenditure frameworks and by extension to longer-term strategic goals. But often these linkages exist only on paper. The situation in Estonia however seems somewhat different. Indeed, in meetings with the review team, officials from a broad range of government agencies demonstrated a remarkable fluency with the objectives laid out in the strategic documents of the government and of the Ministry of Education and Research. Moreover, most of them talked very clearly about the relationship between these objectives and the funding levels laid out in the budget. This suggests that not only is longer-term planning the norm at the national level, but that horizontal co-ordination within and between ministries is well developed. Indeed, given the fluency with which non-governmental actors talked about both the country's educational goals and the state-budget, it is clear that this conversation extends beyond the government itself.

The monitoring and transparency of resource use seems effective

Robust systems of oversight are in place

Estonia has relatively robust vertical and horizontal systems of formal and informal oversight. These systems allow for the prudent decentralisation of managerial authority as

well as the continuous monitoring and periodic adjustments of the system by more centralised agents. These systems exist for both state-run and municipal schools but are probably stronger in the latter.

Estonia has decentralised very significant levels of public sector expenditure control to democratically elected governments whose single most important function lies in the area of education. These local governments are not subject to the fiscal discipline that comes with having to raise taxes in their own name. Nonetheless, municipal governments have invested heavily in their schools while also developing systems that make it easier to further decentralise responsibilities to them. School accounts are typically maintained by the education departments of municipal governments. These departments are generally staffed by people who have been involved with the sector for most of their professional careers.

Larger municipalities have developed remote, electronic accounting systems for their schools. These systems relieve schools of the costs of keeping their own accounts while also giving them the ability to monitor their budgets on a day-to-day basis. They also allow municipalities to track funds to their final uses as well as to impose various degrees of expenditure control on schools' directors. This, however, does not seem to be their primary function and most municipal officials and school directors seemed to regard these systems more as tools that permit the responsible decentralisation of managerial powers than as instruments for hierarchical control. None of the directors that the review team spoke with openly complained about municipal officials micro-managing their financial decisions.

The results of external oversight and control produce concrete and visible adjustments in the governance and functioning of local governments, state institutions and schools. This means that institutions and the people who inhabit them are learning from their mistakes. Also, regulating the flow of private contributions to schools for the income earned by renting their facilities seems relatively unproblematic.

In sum, ensuring that decision makers use funds for schooling in compliance with the law does not seem to be particularly problematic. In part, this is because higher level authorities can track financial flows with relative ease. In part, it is because of high levels of horizontal accountability that ensure that budgets, revenues, and expenditures are fairly continuously being reviewed by different stakeholders, including at the school level through boards of trustees.

There are good levels of transparency

The strategic documents defining state, local government, and school priorities are publicly available as are the budgets of all public institutions. The public's easy access to both strategic and financial documents increases social oversight of the education system, in many ways mitigating more rigid forms of external control.

Estonia has established information systems that make it relatively easy to monitor public sector behaviour and at least with respect to education the country seems to have maintained or developed both high level of professional commitment and significant social oversight. It is in the context of these relatively robust systems of vertical and horizontal oversight that both resource utilisation and resource management need to be understood. Together they are allowing Estonia to decentralise responsibilities to lower levels of governance while making it possible for actors at all levels of the system to monitor each other's behaviours and to periodically adjust the rules and standards which guide them.

The budgets of all municipal schools must be publically available on their websites, while those of state schools are available on the website of the Ministry of Education and Research. All schools are required to have three-year development plans and to publish them alongside their school statutes on their respective websites. In both municipal and state schools, these plans are drafted in co-operation between the boards of trustees and school directors. And, as elsewhere, annual budgets are supposed to be aligned with the priorities defined in these plans. But because the vast majority of school revenues go towards fixed operating costs, these development plans typically focus more on strengthening school identities and communities. Nonetheless, the board of trustees' members the review team talked to generally felt that school development plans were important and did affect how resources were actually spent. So again, horizontal social control over public sector behaviour seems fairly well developed in Estonia at the school level.

Challenges

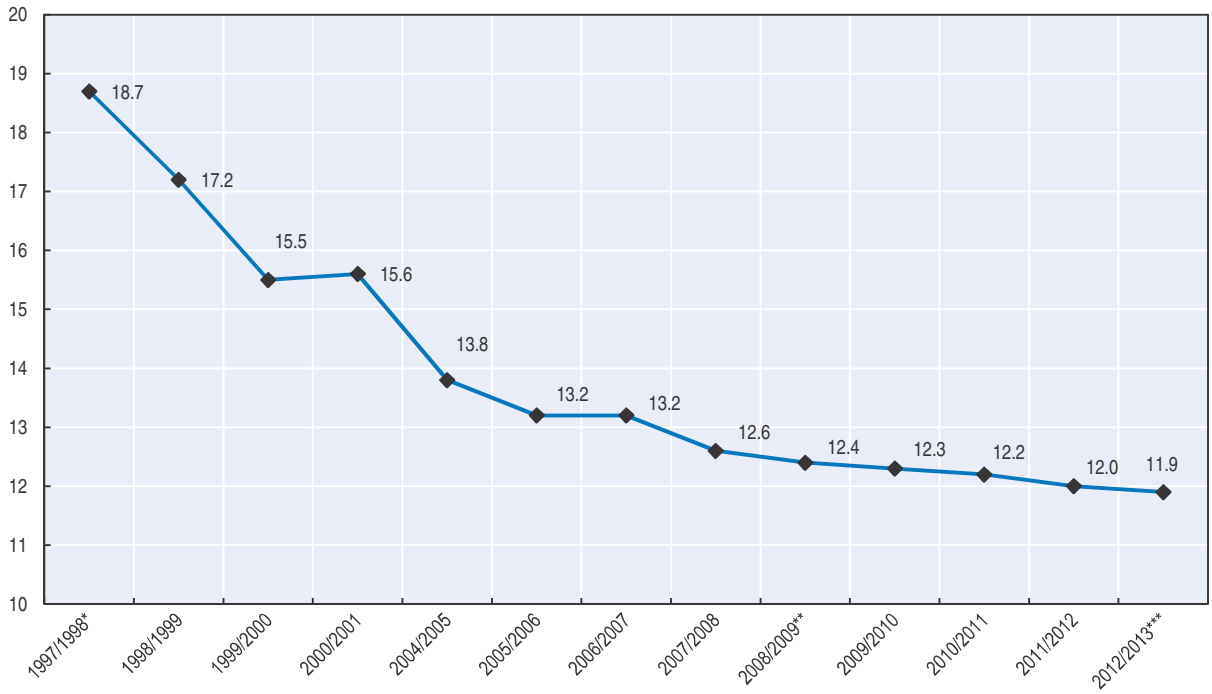
There are a range of pressures for further public spending while inefficiencies can identified

In the coming years, the provision of free tuition for tertiary education students (conditional on student performance); the commitment to further raise the salaries of primary and secondary school teachers; demands to increase the salaries of pre-primary education teachers; and the need to make investments in the rationalisation of school networks as well as modernising VET will all put pressure on the public purse. As always, figuring out how much of this additional expenditure should come from cuts in other spending, the general tax payer, or private firms and individuals will remain a challenge.

Of particular concern is the low public spending on pre-primary education (see Table 3.5), compared to the OECD average. This leads to low salaries for teachers at this level of education, with possible implications for the quality of the services offered. Part of the explanation for the low level of spending lies on the fact that funding comes from municipalities' own resources, which are often scarce. Evidence from the United States (Cunha et al., 2006) and Europe (Wößmann, 2008) shows that investing as early as possible in high quality education for all, and particularly in supporting students from disadvantaged backgrounds, yields larger returns because early cognitive development makes it easier to acquire skills and knowledge later in life. The substantial long-lasting effects of early education on economic and social outcomes are particularly high for children from disadvantaged backgrounds, whose home environments may not provide them with the foundational skills necessary to prosper at later educational stages. In light of this, it is difficult to understand why parents are charged fees in pre-primary education while a new policy of free tuition in tertiary education, which grants considerable private benefits to graduates, was established in 2013.

Over the last 20 years the efficiency of the school system has declined as enrolment has fallen. This can be seen from Figure 3.11. Student teacher ratios dropped from about 19 to 1 in 1998, to under 12 to 1 in 2013. In the short-term, the demand for school services at pre-primary and primary levels will increase, but in the long run the number of students in the school system will keep dropping (see Chapter 1).

Figure 3.11. **Number of students per full-time equivalent teacher, general education, 1997/98 to 2012/13**



* Per student formula introduced.
** Per class formula introduced.
*** Per student formula re-introduced.
Source: Data provided to the OECD review team by the Ministry of Finance.

Local governments have little ability to raise revenues to improve the quality of their services

Estonian local governments have very limited revenue raising powers and 80% of their budgets come from national grants and transfers. On the one hand, this makes it difficult for local government officials to tax their citizens in order to meet their demands for different or higher quality services. On the other hand, and equally important, it encourages both local officials and their citizens to see any local financial difficulties as the result of insufficient national government support. The resulting "fiscal illusion" further depresses the willingness of both local officials and citizens to use local taxes to improve local services.

In particular, the system of capping parental contributions for pre-primary education may work against equity considerations if local governments find themselves unable to create or sustain new places in pre-primary schools without higher parental contributions. There are indications that some municipalities are not able to respond to the demand for pre-primary education places of their inhabitants.

Further improvement is needed in the VET sector

Despite Estonia's commitment to, and investments in vocational education, the VET system is still a work in progress. Enrolment continues to fall; drop-out rates remain high; employers contribute little to the system; and there are no incentives in the funding system for schools to ensure that students complete their studies (see also Chapters 1

and 2). A study by the National Audit Office of the VET schools suggested that many of the investments in the sector were made without sufficient analysis of future labour market trends (National Audit Office, 2005) while another audit suggested improvements to the process of determining state-commissioned places as an approach to public funding (National Audit Office, 2009). In this regard a positive development has been the development of a system of labour market monitoring and future skills forecasting (OSKA), to be implemented by the Estonian Qualification Authority from 2015 onwards (European Commission, 2014). However, a stable model for determining, pricing and funding different types of VET programmes has yet to emerge.

To help reduce drop-out rates in VET schools the national government is considering introducing provisions that would make funding fully or partially dependent on completion rates or rates of job placement. Performance-based allocation mechanisms have the potential to bring improvements to institutions' efficiency, for instance, through improved degree completion rates or lower costs of provision. However, performance-based funding mechanisms should be carefully implemented because they can have undesired effects. For instance, if institutions are funded on the basis of completion rates or credits accumulated by students, some may be tempted to lower their standards in order to improve their funding. This requires adequate quality assurance mechanisms in place. Another possible effect is to induce risk-avoiding behaviour among teachers and school leaders leading to an emphasis on outputs that are easily attainable and measurable.

The national government is sending ambiguous signals about school consolidation

The national government has reacted to declining enrolment ambiguously. On the one hand, national policy makers, concerned about the declining efficiency of the system have periodically tried to exert pressure on municipalities to rationalise their school networks by tightening up the formula used to allocate teachers' salaries. On the other hand, however, many of these adjustments have been designed to, or have *de facto*, allowed smaller municipalities to preserve existing staffing levels by decreasing the normative class sizes used to determine the number of teaching positions that municipalities with different small student populations are entitled to.

While national policy makers are clearly disturbed by the declining efficiency of the system, they have also been sending mixed signals about who should really be responsible for closing facilities. And not surprisingly, local government officials have exploited these mixed signals by insisting that the national government fully fund existing levels of employment despite declining enrolment, "because teachers' salaries are the responsibility of the national government". None of this is particularly surprising because neither local governments nor national policy makers want to be seen as politically responsible for forcing school closure or laying-off teachers. Indeed, similar "blame games" are being played out in all Central and Eastern European Countries that are trying to address demographic decline in a decentralised context.[7]

"Dual budgeting" by the state and municipalities is adding to the ambiguity

A striking structural aspect concerns the separation of the budget process for teachers' and school leaders' salaries (by the state) from the budget process for other school operating costs at the municipal level. In many ways this system of "dual budgeting" has served Estonia well by ensuring that school directors have fairly autonomous control over the pedagogical process while allowing the national government to regulate minimum

teachers' salaries. On the one hand, it encourages the idea that the national government is responsible for teacher salaries and that it should determine how much labour really needs to employed in schools. On the other hand, it encourages local governments to ignore the decisions of school directors that may have systemic implications – like keeping salaries low in order to maintain small classes – while discouraging them from developing system-wide personnel policies to facilitate network consolidation, policies that might include severance payments for redundant teachers or higher salaries for new entrants or for those remaining in the system.

Indeed, "dual budgeting" combined with the limited financial autonomy of local governments makes it very unlikely that local governments will turn to their electorates and say: "Our desire to maintain small schools and small classes is costing us more than what we receive from the national government in financial support. So if we want to have more teachers than the norms allow, or to pay them better, or to provide additional hours of instruction, then we need to raise local taxes." At the same time, it is making it difficult for the national government to clearly specify minimum class or school sizes, and to adjust funding levels to these norms, because it doesn't want to be seen as forcing network consolidation or layoffs.

Responsibilities for teacher employment and salaries are unclear

This dual budgeting and the frequent and ambiguous changes in the formula for allocating the Education Grant for teachers' salaries has encouraged the idea that teachers' salaries and employment are not an important concern of local governments. It has also made it unclear which level of government should really be responsible for bringing teacher employment closer in line with declining enrolment.

There is little acknowledgement of the interrelated need to restructure employment

The discourse about network rationalisation is typically framed in terms of facility utilisation rates, and to lesser extent educational quality, while avoiding the equally thorny – or thornier – problem of restructuring employment. In the course of the interviews of the review team with Estonian educators at all levels, it felt like overstaffing was the "thing that shall not be named". This avoidance is making it difficult for reformers to creatively link other questions concerning the use of professional labour in the system as a whole, with the problem of network consolidation.

This reticence to talk directly about the apparent oversupply of teachers (see also Chapter 5) in the system meant that aspects of teacher employment that people openly discussed were not being linked to the issue of restructuring when it seemed they could be. For example, the OECD review team was often told that Estonia's teaching force is now among the oldest within the OECD area, and that there are serious problems attracting young, talented people to the profession (see Chapter 5). But these problems were not associated with poor prospects for professional advancement that new entrants into the field may face because of over-staffing, and the problem of attracting younger people to the profession was framed as a salary problem, or a prestige problem, but not a "space" problem. At the same time, no one raised the possibility of providing incentives to older teachers to retire.

Also, and perhaps more interestingly, the review team had a number of conversations in which policy makers highlighted the need for more skilled educators in various segments of the system. Thus, those concerned with the difficulties Estonia faces with

mainstreaming special needs students in mainstream schools hoped that these schools could be provided with additional teachers to ensure the success of the process. Similarly, the officials responsible for establishing the new regional centres for career counselling, and psychological support complained about their problems staffing these institutions with experienced personnel. And finally, those concerned with increasing the access of Russian-speaking students to Estonian tertiary education institutions stressed the need to provide them with more intensive Estonian language training. But again, nobody seemed to see potential linkages between the shortage of highly qualified teachers in some areas of the system and their oversupply in others.

There is a lack of co-ordination to rationalise the school network

Jurisdictional fragmentation is making it harder for Estonia to rationalise its secondary school facilities because many of its municipalities are too small to maintain effective and efficient secondary schools, and in some cases primary school facilities. Indeed, as can be seen from Table 3.8, more than half of all local governments have only one school. These jurisdictions will fight bitterly to prevent these schools from being closed. At the same time, however, only 13% of the total student population attend these schools, and the majority of them attend Years 1-6.

Table 3.8. **Jurisdictional fragmentation and average class sizes, 2013**

		Local governments with only one school	Local governments with more than one school	Total
Number of local governments		117	93	210
Number of students by Year	1 to 6	10 214	62 720	72 934
	7 to 9	5 301	28 913	34 214
	10 to 12	2 221	22 085	24 306
	Total	**17 736**	**113 718**	**131 454**
Average class size by Year	1 to 6	11.4	13.6	
	7 to 9	11.1	13.5	
	10 to 12	15.1	20.0	

Source: Data provided to the OECD review team by the Ministry of Finance.

The county-level governments that could run upper secondary schools are, however, too weak financially and politically to manage this responsibility. This is creating serious co-ordination problems with respect to the consolidation of secondary schools, a pressing task now that enrolment has bottomed out at this level of education (see also Chapter 2).

Recently, the Ministry has decided that the best way to facilitate network consolidation is by essentially "recentralising" upper secondary education. This is part of the broader strategy to clarify responsibilities for the management of public education between the state and municipalities, in view of giving responsibility, in the medium-term, to the state for upper secondary education (both general and vocational) while leaving the responsibility for pre-primary and basic education to municipalities. This new policy is being expressed in two ways. First, rules have been introduced that prevent local governments from creating new full-cycle schools for Years 1-12. Moreover, any new or reorganised school can no longer combine upper secondary education with other levels of

education. This will force sparsely populated municipalities to close their upper secondary education programmes because they will not have enough upper secondary school age students to create self-standing *gymnasiums*.

Second, and more importantly, the national government is moving to establish at least one new state-run *gymnasium* in every county so that secondary school students from municipalities too small to sustain upper secondary schools will be forced to send their students to a modern *gymnasium* designed for between 250 and 750 students. These facilities, it is argued, will make it possible to provide better quality education at a more affordable price.

It is also expected that the separation of upper secondary education from basic schools will encourage students completing Year 9 to more seriously consider their educational options and not just to continue on in the school they know. As such, the "recentralisation" of secondary education is also part of a broader strategy of improving the alignment of the education system with the needs of the labour market by encouraging more students to eventually choose vocational education as they leave basic school.

The Ministry of Education and Research has set an ambitious target of reducing the number of schools with upper secondary education from almost 200 to less than 100 by 2020, and that eventually all *gymnasiums* have more than 250 students. Four new facilities have already been established and the Ministry is negotiating with local governments about where the next ones should be established (see Box 3.1 for the example of Jõhvi). These negotiations are not easy because local governments understand that the new state-run facilities will compete with their own schools for teachers and students – including students who currently commute to their schools from other municipalities. Indeed, the Ministry is expecting its modern, well-equipped facilities and well-staffed schools to be particularly attractive to commuting students, in part because their local governments will no longer have to pay the per student amount associated with the non-salary operating costs of another municipality's schools. So to encourage local governments to co-operate with its plans, the Ministry is offering them investment resources to restructure and consolidate their schools with upper secondary education into basic schools. The objective is that, by 2020, the schools run by municipalities no longer include upper secondary education (Years 10-12). In fact, over the 2014-20 period, the Ministry expects to divide the EUR 250 million in investment resources contained in the current round of EU structural and

Box 3.1. **State upper secondary school in Jõhvi**

In Jõhvi the national government has decided to consolidate the upper years of the existing Estonian-speaking and Russian-speaking schools into a new state run *gymnasium*. About 120 students from each school are expected to attend. But the *gymnasium* is being built for 500 students in the hope that it will attract most of the secondary school students from the surrounding municipalities. Whether students from surrounding municipalities will choose to leave their home town schools and commute to the new state run *gymnasium* in Jõhvi is an open question. In part, it will depend on the availability of convenient transport, in part on whether surrounding municipalities choose to close the upper years of their existing schools, and in part on how well the integration of Russian-speaking and Estonian-speaking students goes in the new *gymnasium*. If there are challenges along any of these dimensions it is quite possible that the new *gymnasium* will function below capacity.

investment funding, more or less evenly between the costs of building new state *gymnasiums*, and the costs of helping local governments who agree to co-operate with funds necessary to restructure their basic schools.

How much these side payments will actually cost, and whether state-run *gymnasiums* will attract the students necessary to justify their construction or sustain their operating costs remains an open question. It is not hard to envision scenarios in which competition between state, municipal, and (to lesser extent) private schools, for students, teachers and funding, gets fierce. Indeed, there is nothing in the plan that guarantees that newly constructed state-run *gymnasiums* will attract the students necessary to fill them, and while the negotiations between the national government and the larger jurisdictions in which the new *gymnasiums* are supposed to be located will surely lead to a decrease in the number of municipally-run schools that offer Years 10-12, they are not being required to close them.

Perhaps, most importantly, the municipalities whose students are supposed to commute to the new *gymnasiums* will be allowed to run full-cycle Years 1-12 schools for as long as they can afford to. As such, it is entirely possible that the construction of new state *gymnasiums* will actually compound the sector's efficiency problems while generating all sorts of unhealthy competition between municipalities, private schools and the state for a declining number of students. It is not clear whether the national government's attempt to resolve these co-ordination problems by creating state-run secondary schools will work in an environment where students will continue to be free to go to municipal or private schools. At the same time, some forms of network infrastructure important for education seem to be undervalued given the importance that the national government now seems to be placing on the consolidation of upper secondary school. These include student dormitories and regional public transport and road networks. However, new state *gymnasiums* will offer accommodation for those students who need it and transportation support will be provided.

There are some concerns about the public funding of private schools and the licensing of new privately-run schools

Private schools are entitled to the full amount of funds that are being spent in public schools: on the one hand they are entitled to the same per student salary subsidy from the national government that municipal governments receive for their schools. On the other hand, local governments are legally obliged to provide them with funding equal to the average amount they spend on the other operating costs of their schools. They can also charge tuition fees. In practice, this may amount to subsidising richer households to pay for services they might well purchase on their own at a higher price and to cheaply opt out of the public school system in the name of school choice.

Not surprisingly, the number of private schools has grown rapidly in recent years and while school choice is important, the level of the subsidy may be unnecessarily and imprudently high. In short, the generosity of the subsidy may work against the objective of network consolidation given that state and municipally-run schools will be competing with private schools for students in an environment characterised by overcapacity.

A major concern is that new entry by private schools, encouraged by the funding system, has resulted in smaller schools and class sizes and hence a higher cost school system with no evident increase in student learning outcomes. In fact, class size in the

private sector is considerably smaller than in the state and municipal sectors: 15 in primary education (2nd lowest figure within the OECD area), against an overall country average of 17; and 12 in lower secondary education (the lowest figure within the OECD area), against an overall country average of 16 (OECD, 2014, see also Chapter 5).

Rules governing the carryover of school funds from one budget year to the next need to be clarified

Municipal schools in many jurisdictions seem to have problems retaining funds across budget years despite the fact that this is apparently allowed by the law. These problems depress the willingness of schools and school directors to mobilise revenues from donations, asset income, or the sales of goods and services. They can also result in inefficient spending as schools seek to spend their annual budget within the time limit rather than wait and spend on items that are more useful for the school. Another disadvantage of not being fully able to carry over unspent funds is that schools are unable to save for large capital projects, though this would require the ability to carry over unspent surpluses for several years. However, allowing unregulated carry-over of budget surpluses can lead some schools to accumulate excessively large balances and consequently not spend money that was intended for the current generation of students.

There are some equity concerns

In municipal schools, parents often contribute funds to their children's schools or classes for specific purposes such as special events, artistic performances, and class outings. Typically, these funds are held "off-budget" with their expenditure under varying degrees of social and/or directorial control. In their interviews with the review team, some actors expressed concerns that these private contributions were undermining the equity of the system and needed to be better regulated. Other actors felt that the contributions were generally modest, that people knew what was going on, and that contributions were not tied to services rendered just for "their children", but for the class or the school as a whole. It is not clear how this question is regulated in state-run facilities. In VET schools however, the OECD review team believes it is less of an issue simply because the poorer and more geographically dispersed households of VET students have less to contribute, and identify less with their schools.

In addition, overtime, income differentiation across both households and local governments may work against poorer families (in poorer municipalities) participating in pre-primary education: because the salaries of pre-primary school teachers are not financially supported or regulated by the national government, local governments that cannot afford to raise pre-primary education salaries may dilute the educational role of pre-primary schools. Others may try to raise teachers' salaries, but then feel compelled to raise prices. The rules that cap pre-primary education fees at 20% of the national minimum salary ensure that "nobody pays too much". Nonetheless, such fees are regressive. They could be made more equitable by allowing local governments to differentiate the fees households pay in relationship to their income.

With one important exception, household payments for tutoring services to prepare students for important external examinations seem to be a marginal feature of the system. But the households of Russian-speaking students do often seem to spend considerable sums on helping their children master Estonian in the run-up to the external examination

marking the completion of basic education. This underscores the problems previously discussed concerning the ability of Russian language students to get adequate Estonian language instruction, which is inequitable.

The integration of annual budgeting with strategic planning has some limitations

The integration of annual budgeting with strategic planning at the local level with respect to the critical issue of network consolidation remains weak. As is the case with national ministries, local governments are required to align their annual budgets with both four-year expenditure plans, and longer-term Strategic Development Plans. Here, however, it is less clear that the requirements for multiyear financial planning are working as well in the education sector as they seem to be at the national level. The basic reason for this lies in the system of dual budgeting that has grown up around the Education Grant that local governments receive from the national government for teachers' salaries. As described earlier, the amount of money put into the grant fund and the formula used to allocate it have changed frequently over time and have progressively put pressure on local governments to close facilities and reorganise school networks in the face of demographic decline.

At the same time, however, this pressure has been inconsistent and sometimes couched within an unstated assumption that the national government will continue to fund schools at existing levels of teacher employment. Demographic decline has made this assumption increasingly expensive and ultimately untenable. But for the same political reasons that make local governments reluctant to close schools and let go of teachers, the national government has been unwilling to openly declare that funding levels are tied to specific expectations about class and school sizes, and that local governments who do not meet these norms will have to pay the additional costs out of their other revenues. And without such a declaration from the national government there is no good reason for local governments to take it upon themselves to incur the political and financial costs of network adjustment because "teachers' pay is the responsibility of the national government".

This does not mean that there is no long-term budget planning at the local level. On the contrary, there seems to be a fair amount of it with respect to pre-primary schools, the development of non-school educational facilities, school management systems, and other education-related community activities. Moreover, at least some larger municipalities have responded to the national government's plans to separate upper secondary education from basic schools and to build state-run *gymnasiums* by drawing up their own consolidation plans. Nonetheless, in most jurisdictions the linkages between annual budgets and strategic development planning remain weak in the critical area of network planning.

There is scope to adjust the use of European Union structural funds

Analyses of the use of EU structural funds for the operational programmes for 2004-06 and 2007-13 provide indications that some adjustments can be made to the implementation of projects which benefit from EU structural funding.[8] An audit by the National Audit Office of the use of EU structural funds for social (including educational) infrastructure of local governments (National Audit Office, 2012) revealed a number of challenges, including: i) investments into school infrastructure (construction and renovation of schools, mainly in general education) were made with little consideration of future operating costs and with little account of demographic developments (i.e. the need for school consolidation); ii) no transparent and explicit criteria were used to select the funded projects; and iii) no adequate impact evaluation was designed and conducted. This highlights that the link between

co-funding from EU structural funds and national education policy is not always strategic. The report also notes that the grants were used for the intended purposes and their impact in terms of the provision of additional public services was visible. The report makes a range of recommendations which were taken into account by the concerned ministries in the preparation of the Operational Programme for Cohesion Policy Funds 2014-2020 (Ministry of Finance, 2014a).

Another study by the Praxis Centre for Policy Studies (Haaristo et al., 2013), commissioned by the Ministry of Education and Research aimed at evaluating the mid-term implementation of seven European Social Fund (ESF) measures in the area of general education and youth work in Estonia, which were part of the Operational Programme for Human Resource Development 2007-13. These include areas such as regional counselling centres, career services, professional development for teachers and study materials for special needs students. Three central issues emerged as the main implementation weaknesses, which should receive special attention in the implementation of the 2014-2020 Operational Programme:

- The development of interventions often lacked a clear rationale based on a clear assessment of challenges and needs. The report recommends comprehensively documenting the issues the interventions are supposed to address, followed by a clear definition of goals.
- The monitoring of the implementation was hindered by the inadequacy of indicators often with vague links to objectives. The report recommends a better selection of indicators for proper monitoring.
- The financial sustainability of the measures did not receive enough policy attention (i.e. no strategies were established to ensure the continuity of the activities/interventions once EU structural funds are no longer available). The report points to the risk of discontinued development of some policy areas if funding stops and no funding alternatives are available.

Policy recommendations

Establish average minimum class sizes and specific earmarked grants

Funding formula elements that sustain small classes do not promote efficiency unless the schools thus protected are only those that must be retained to ensure student access to schools (i.e. access within a reasonable distance and provided locally for early learning). An option to be considered in order to consolidate the school network is the specification of a threshold class size or average school class size below which students would not be funded from the state grant, unless the school is identified as meriting “protection” in order to maintain student access in remoter areas. This would promote class consolidation if the minimum class size specified is sufficiently high, though such a rule might well face considerable opposition from some stakeholders.

The government could define an average minimum class size below which a school is not funded from the state budget if the school’s average class size remains consistently below the threshold size for a given number of years – for example three years. Average class size would be measured as the average number of students per year level, since a small school would not be forming more than one class per year level. Different class size thresholds should be defined for different education levels and rural locations. Primary education classes, in particular in Years 1 to 6, need to be smaller in rural areas than

classes for secondary aged students, who are capable of travelling longer distances to school. Hence, regulations about the average minimum class size could take into account the extent to which early learning is to be provided locally. The same rules should apply to private schools already included in the network of schools. This strategy would imply using a salary grant formula to fund municipalities which takes into account data at the individual school level.

Within the extent of the state funding resulting from the regulated average minimum class size, school owners and schools would retain their autonomy on class organisation, including in deciding the actual size of specific classes within schools. This could possibly be assisted with extra resources coming from the school owner's own revenues. In particular, if local governments want to maintain schools with average class sizes below the regulated average minimum class size, they would pay for the additional costs out of their general budgets. Moreover, in this context, local governments would need to play a more active role in monitoring and controlling the education process, at least with respect to class sizes, professional support services, and statutory salary increases. This regulation could still be combined with the continued setting of minimum teacher salaries by the national government and the continued provision of local governments with 20% more in salary funds than the minimum class-size norms called for so that the broad framework of decentralised salary setting would be maintained.

Average minimum class sizes should be announced by the national government as a new national policy that will be phased in over a specified number of years to allow adjustment, but enforced. This sort of declaration is necessary if local governments are going to turn to their electorates and say, "This is the national government's policy. It is being made for understandable educational and fiscal reasons. We can try to keep our costs within the funding envelope we are getting, we can cut other costs, or we can raise taxes." The regulations on minimum average class sizes established by the national government make it clear the conditions for state funding of municipal education while preserving municipal autonomy in determining the size of both municipal schools and classes.

In order for local governments to have real choice, consideration could be given to increasing, at the margin, their own-revenue raising powers. Indeed, in as much as local choice remains a principle of the Estonian school system for a responsive and a creative school system, and in as much as the state clarifies the lower boundaries of that choice through average minimum class sizes, then a case can be made for expanding (at the margins) the upper range of choice for local governments by increasing their fiscal autonomy. For example, many of the intergovernmental finance systems in Nordic countries give local governments substantial control over personal income tax rates. Some Central and Eastern European Countries have also started to do this this (e.g. Croatia, Montenegro) by giving local governments the right to impose a local surcharge – within limits set by law – on the national government's rate, while others are considering it. Ideally, expanding the own revenue powers of local governments would also be accompanied by some jurisdictional consolidation to decrease the incentive such taxation might create for people to move from one jurisdiction to another – particularly from urban to suburban ones. At the same time, this would require strengthening the equalisation system for those local governments whose fiscal capacities are weaker. It is recognised, however, that moving in this direction requires considerations that go beyond the education system.

In order for local governments to have real choice, consideration could be given to increase, at the margin, their own-revenue raising powers. Indeed, as much as local choice remains a principle of the Estonian school system (at the margins) for a responsive and a creative school system, and in as much as the state clarifies the lower boundaries of that choice through average minimum class sizes, then there might be a case to increase (at the margins) the upper range of choice for local governments by increasing their fiscal autonomy. For example, most of intergovernmental finance systems in Nordic countries give local governments some control over personal income tax rates. Some Central and Eastern European Countries have already done this (e.g. Croatia, Montenegro) by giving local government the right to impose a local surcharge – within limits set by law – on the national government's rate, while others are considering it. Ideally it would also be accompanied by some jurisdictional consolidation to decrease the incentive such taxation might create for people to move from one jurisdiction to another – particularly from urban to suburban ones. At the same time, this would require increasing the robustness of the equalisation system for those local governments whose fiscal capacities are weaker. It is recognised, however, that moving in this direction requires considerations that go beyond the education system.

As an alternative to introducing a minimum class size threshold, further measures could be taken to put financial pressure on school owners with small schools and classes such as by modifying the existing compensation mechanism used to give more funding per student to small municipalities. This would involve increasing, for the smaller municipalities, the normative class sizes used to determine the number of teaching positions that municipalities with different student populations are entitled to.

An additional measure is to define the minimum number of students required before a school is approved for inclusion in the network, for instance with an average class size of 20 for Years 1-9 and of 25 for Years 10-12. Maintaining a sufficiently high class size threshold before schools are included in the network would go some way to address the problem that new entry from the private sector, stimulated by receiving the same per student formula allocation as public schools, has resulted in reducing average school size and thus the efficiency of the school system. This suggestion is consistent with the recent efforts of the Ministry of Finance and representatives of local governments (Association of Municipalities of Estonia, Association of Estonian Cities) to define minimum school sizes in relationship to the distance of schools from each other. As with average minimum class sizes, this initiative forces the national government to set norms that nobody wants to meet, and thus to bear the first wave of political protest against the decision. But it leaves local governments to do all the hard work afterwards, hard work for which they also need a political shield in the form of national policy.

In addition to the financial incentives provided by an appropriately designed funding formula, the government needs to implement other policy measures to encourage or enforce school and class rationalisation. In particular, this involves co-ordination and co-operation among municipalities, as suggested in Chapter 2.

Finally, the government should also consider using earmarked grants to provide local governments with additional funding for:

- mainstreaming students with special educational needs
- providing additional Estonian language instruction for Russian-speaking students

- providing targeted support to families unable to meet the co-financing requirements of municipal pre-primary schools
- subsidising school transport and the maintenance of dormitories.

More debatable is whether funding for school lunches or study materials (e.g. textbooks) needs to be earmarked, given the horizontal level control in the system. Or put another way, so long as it is publicly known that free lunches and free textbooks are a universal entitlement and the national government is calculating X amount per student for one, Y amount for the other, earmarking is probably unnecessary. This adjustment could be gradually introduced as municipalities gain capacity to manage their education budgets.

Strengthen approaches to consolidate upper secondary education

The review team supports the government's goal of "recentralising" general upper secondary education as an important step to simplify the governance of public schooling in Estonia whereby, in the long-term, a clear division of labour will be established: municipalities managing pre-primary and basic education; and the state managing *gymnasiums*, vocational education and special schools. This would be part of the larger strategy to clarify responsibilities in the education sector. In this way, the national government's policy of not allowing local governments to create new schools that combine the teaching of primary and lower secondary education with Years 10-12 is a step in the right direction. However, as explained earlier, the implementation of the "recentralisation" policy is faced with a number of challenges and needs to proceed with considerable caution. The following strategy is suggested:

- Local governments should be required to create separate upper secondary schools of reasonable scale by a certain date or close down whatever upper secondary classes they may have. This will make it clear that the political decision to consolidate upper secondary education is being made by the national government, but local governments themselves will have to implement the policy over a reasonable period of time. This process will demonstrate which local governments are in a position to offer upper secondary education in efficient ways, i.e. offering quality education at an adequate scale.
- Local governments which demonstrate the ability to run upper secondary education within operation parameters defined by the state (e.g. in terms of scale, quality and diversity of offerings) and which express an interest in keeping the management of upper secondary education could be allowed to do so under formal agreements signed with the state. While the state would manage the overall framework for upper secondary education provision, it could delegate the management of upper secondary education to some local governments (e.g. commissioning student places within given parameters it defines). This would allow the largest cities, if they so wish, to keep operating their general upper secondary schools under a regulatory framework defined by the state.
- State-run *gymnasiums*, as currently planned, could then be targeted to meet the demand for general upper secondary education in those geographical areas where the corresponding municipalities are not able to offer such service according to the parameters established by the state. The need for one state-run *gymnasium* per county will depend on the provision of general upper secondary education by large municipalities which results from the assessment described above.

Implementing this strategy will mean that students in many municipalities will now have to commute to upper secondary schools elsewhere, meaning most probably in the nearest largest town. Here, the biggest policy challenge will be to ensure that these commuting students have places to go, and that the importing municipalities treat them as they treat their own students.

The strategy proposed is likely to imply that not every county needs a state-run *gymnasium*, particularly in the case of the counties where the largest cities are located. This would avoid picking up unnecessary fights with the large municipalities that can run *gymnasiums* of scale and under the right conditions will happily take in commuting students. Here it is important for policy makers to recognise that there are limits to their ability to anticipate the demand for places in new state-run *gymnasiums* if on the one hand they are competing for students with municipal and private schools in the municipalities in which they are located, and if on the other hand it is unclear when students from surrounding areas will choose to abandon their local school and commute somewhere else.

In short, it's not hard to anticipate scenarios in which the state builds new *gymnasiums*, pays larger municipalities considerable amounts of money to restructure their basic schools to agree to the deal, and still finds itself losing the battle to fill its new facility because the local children stay local, some of the commuting children like municipal or private schools better, and other commuting children decide to stay home even if upper secondary education they are getting is small and limited. Efforts to win this competition by creating super modern facilities or paying teachers could easily poison state-local relations in the largest municipalities, while actually also working against the goal of increasing VET enrolment.

In this context, it seems to the review team that the national government should be extremely cautious about constructing state-run *gymnasiums* (or renovating existing infrastructure), though it clearly may be called for in some places. Instead, as proposed above, the government should first assess which large municipalities are capable and willing to offer general upper secondary education, within regulatory parameters established by the state, and then follow a county or regional-based approach to define where the new state-run *gymnasiums* should be located. In this scenario, national and EU investment funds are not used to build a new state-run *gymnasium* in each county or to help larger jurisdictions reform their basic schools. Instead, they are used to:

- Help larger municipalities expand the capacity of their *gymnasiums* to receive students commuting from municipalities too small to sustain their own.
- Help smaller municipalities close their upper secondary education classes in return for investments in communication networks and their remaining basic schools (as is already the case).
- Pay the municipal fees that larger municipalities would otherwise charge to smaller municipalities for commuting upper secondary school students.
- Ensure that regional road systems, public transport networks, and dormitories make commuting as easy as a possible.
- Amend the governance structures of schools in which there are significant numbers of commuting students to ensure the representation of both their parents and their local governments.

This strategy will require a lot of tough negotiations to succeed. Indeed, for the process to get off the ground, the national government would have to make it clear to all parties that for both educational and fiscal reasons *gymnasiums* of less than a specified size will be rapidly phased out and that students in municipalities too small to maintain such institutions will be required to commute. Municipalities that will lose upper secondary schools will have to be ensured that commuting will be made as easy as possible, and that their students will not be treated like second class citizens in the schools they end up attending. Municipalities receiving these students will also have to ensure they will be provided support in expanding capacity where needed, and in covering the share of operating costs represented by commuting students.

Accommodate the side-effects of school consolidation

The national government should be moderate about the increases of teacher salaries until substantial progress has been made in restructuring school networks and in developing plans for reallocating or removing teachers made redundant by school or class closures (see Chapter 5).

Equally importantly, county-level plans for consolidation (as suggested in Chapter 2) should be accompanied by strategies and funds to redeploy and retire teachers currently employed in schools or classes scheduled to be closed. Here, it is important to note that there are a number of areas in which some teachers made redundant by school closures could gain new relevant functions. These include engaging them to help mainstream special needs students in mainstream schools and classes; employing them as mentors and advisors in the new regional counselling centres; and using them to provide additional language training to Russian-speaking students (see also Chapter 5).

School closures and network rationalisation may also significantly increase disparities in the per capita revenues of local governments because small municipalities will lose some (or all) of both their education grant and the Personal Income Tax share that comes with school employment. They may also see the costs of pre-primary education rise, at least in as much as pre-primary education has been provided in facilities shared with primary schools, and supported by teachers employed in those schools. Taken together, this may put pressure on rural municipalities to reduce access to pre-primary education. The national government should counter these pressures with additional targeted support.

Give careful attention to equity objectives as school consolidation policies are implemented

It is essential that the equity dimension remains a key feature of school network design and planning. There is a need for a continuous monitoring of the equity implications of all restructuring or rationalisation decisions. The specific needs of the socially disadvantaged groups, students with special educational needs or ethnic minorities have to be considered and the implications of rationalisation measures need to be carefully analysed. It is proposed that this dimension receives the greatest attention when creating the new institutional frameworks for effective network design and planning with guarantees such as the participation of the representatives of the most vulnerable groups or the obligation of adding an equity clause to each restructuring or rationalising measure.

The national government should also consider loosening the restrictions on local governments to charge parents fees for pre-primary education. This could be done by allowing them to introduce higher payments for families whose household income

exceeds a certain national or regionally-defined threshold. Fees would then be set in association of parental ability to pay.

Adjust the public funding of private schools

The national government should reconsider its policy of providing private schools exactly the same amount of money that is spent on students in public schools given that private schools are allowed to charge fees. Providing such substantial subsidies to generally wealthier households to opt out of the public school system raises serious equity issues and over the longer term quality issues by depriving public schools of the input of often more engaged parents and students. It also runs against the state's objective of consolidating public education into schools of an effective scale and in this light can be considered counter-productive. The easiest way to do this would simply be to drop the requirement that municipalities provide private schools within their territory with the same amount of money they spend per student on the non-salary operating costs of their schools.

Also, decisions on allocating public funding to education services should increasingly depend on needs analysis and quality assessment, for instance to approve entry of a new private school in the school network. Only services of proved quality should get public funding and only new services whose need has been identified should be allowed to become part of the school network.

Invest in pre-primary education

The current financing of pre-primary provision requires reform. While coverage rates for children aged 3-5 have reached good levels, public spending on pre-primary education relative to GDP per capita remains very low by OECD standards. This is reflected in very low salaries for pre-primary education teachers (see Chapter 5), possibly resulting in lower quality of pre-primary services. The low level of public funding in pre-primary education is partly explained by the fact that it is provided by municipalities which often have very limited own resources. The result is the inability for some municipalities to meet parental demand and their need to charge parental fees. The latter might affect in particular disadvantaged families.

At present, the Ministry of Education and Research is addressing this problem through ad hoc extra public funding for those municipalities which have more difficulties in meeting parental demand, particularly in urban areas. However, since pre-primary education is so important in preparing a child for a successful school career, it is recommended that, as additional public resources become available for education (e.g. as a result of school consolidation), the Ministry of Education and Research progressively assumes responsibility for the full public funding of pre-primary education, transferring public funds for pre-primary education to municipalities as it does for primary and secondary education (e.g. through the education grant). This should also progressively lead to the removal of fees in pre-primary education, which are difficult to justify in light of the greater social returns pre-primary education has relative to tertiary education (where tuition fees were eliminated in 2013).

Strengthen funding approaches for vocational secondary education

Improving the attractiveness and efficiency of vocational secondary education involves making programmes more relevant for the labour market and for regional development, further involving employers and improving student completion rates. A

holistic strategy could combine: a funding approach that gives institutions more stability and better incentives to improve completion rates; improved career guidance for students; more committed engagement from employers; and ensuring regional development strategies are taken into account.

In order to strengthen the stability and predictability of the funding of vocational education and training it is recommended to introduce national level mid-term planning for professional profiles and the associated financing with a definition of publicly-funded student places, per occupation and VET school, for three-year periods instead of the current annual decisions by the State Commission for Vocational Education.

A priority to address the dropout rate challenge in vocational education in Estonia should be the improvement of career guidance services both prior to enrolment in vocational education and during vocational studies. However, reducing the dropout rate may require a more complex set of policy instruments at upper secondary level. For example, creating an early warning system that effectively helps the identification of students at risk of dropping out, as well as building the necessary prevention capacities of teachers and institutional capacities of VET schools are important instruments. These school-based systems work well if vocational schools themselves are interested in improving their retention capacity; therefore the application of financial incentives is an important condition of the success of such initiatives. Since the reduction of early school leaving is one of the headline targets in the Europe 2020 strategy, various international co-operation projects already accumulated a great deal of good policy practices both in relation to policies and school-based early detection, prevention and intervention techniques (RESL.eu, 2014).

One of the possible incentives for improving completion rates in vocational schools is already being considered by Estonian authorities: adding a performance-based component to the funding of individual vocational schools. However, for the reasons explained previously, introducing a performance-related component to funding needs to be done with caution to avoid non-desired effects (see below). Box 3.2 provides the example of the approach to performance-based funding of VET providers in Finland. Also, the national government should adjust the funding to individual VET schools to ensure per student funding is based on the actual number of enrolled students, i.e. funding levels based on attributed commissioned places should be adjusted during the school year to take into account places which remained vacant and students who dropped out.

Indicators used in performance-based funding systems should relate to aspects to be enhanced in institutions such as internal efficiency (e.g. costs, completion rates) and external efficiency (e.g. quality of graduates). A wide range of indicators are used in countries which have implemented performance-based allocation mechanisms. Indicators more associated with study completion are student graduation/completion rates, number of credits accumulated by students, average study duration, ratio of graduates to beginners, or number of degrees awarded. Other indicators focus on the labour market outcomes of students: employment rates of graduates, or the extent to which employment is in a field related to the area of studies. However, some prerequisites need to be in place for the successful introduction of performance-based funding. It is important to use simple measures which are more readily available and can easily and reliably be interpreted as measures of performance. Also, there should be administrative capacity in place to manage and interpret a great deal of information. Lastly, the measures being used should

Box 3.2. **Performance based funding for vocational secondary schools in Finland, 2006**

In Finland performance-based funding of VET service providers was introduced in 2002 when education providers were granted separate state subsidies based on their performance. The system became a part of the unit price determination in 2006. Performance-based funding is approximately 2%, roughly EUR 20 million of the whole funding of vocational education. The allocation of performance-based funding is based on the performance-based funding index, which has been created from the combination of the following indicators:

- Effectiveness: job placement (40% of weight in index) and further studies in higher education (15%).
- Processes: drop outs (15%) and ratio of qualification certification holders to entrants (13%).
- Staff: formal teaching qualifications (11%) and staff development (6%).

When the performance-based funding index is calculated, indicators are assigned different "weights" of importance, as shown above.

Source: Kyrö, M. (2006), *Vocational education and training in Finland: Short description*, Cedefop Panorama Series, No. 130.

be transparent to all stakeholders involved. This highlights the need to achieve political agreement among a broad range of stakeholders regarding the terms for introducing an output-based component for institutional funding.

One possible way to minimise the potential undesired effects of the performance-based component of funding to vocational schools is keeping the actual weight of the performance-based allocation limited, as is the case in Finland. Introducing such component in a small scale (e.g. 2-5% of funding) is probably sufficient to provide the desired incentives for institutions to improve student completion rates. Also, instead of comparing absolute results of schools within a year, a strategy is linking financial incentives to the evolution of school results over the years. Before introducing any performance-based elements into the funding of vocational schools, it is recommended to run experimental funding schemes in a limited number of schools where effects are carefully monitored.

Exploring various ways and incentives to increase the contribution of companies to the costs of vocational education and training is also recommended. One option is to establish a vocational education and training fund to which those enterprises, which do not invest in training directly, contribute. Also, the introduction of tax allowances could encourage increased employers' contributions. An additional possibility is to expand the opportunities for dual training in which companies contribute to the costs of apprenticeships by paying apprentice salaries.

Also, including discussions of the future evolution of vocational education into the regional development forums and negotiations proposed in Chapter 2 would probably be a good idea, both with respect to VET schools as such and VET schools as centres of lifelong learning. This would also help to ensure that the regional discussions of network consolidation included not just parents, teachers, and government officials – be they local or national – but representatives of the private sector.

Improve the conditions for schools to use their funds

The rules permitting fiscal carry overs for publicly-run schools should be clarified and/or strengthened. It may also be desirable to allow schools to maintain independent bank accounts for special purpose funds. If so however, the amount of funds held on these accounts should be easily visible to both local governments and the public at large. Municipalities should also be required to define rules that clearly govern how income from asset rentals will be divided between the school and the municipality's budget.

Improve the use of EU structural funds

EU structural funds represent a sizeable proportion of the investment in Estonia's education system and it is fundamental to align the design of the related operational programme to the education national strategy. This is now done as the 2014-2020 Operational Programme gave full consideration to both the priorities identified in the Lifelong Learning Strategy 2020 and the country specific recommendations under Europe 2020. The plans for the current 2014-20 period put more emphasis on the reform of the general education system than before. Investment funding will be focused on consolidating the upper secondary schools' network and reorganising basic schools, possibly based on the analysis developed by the Praxis Research Centre (Põder et al., 2014). Support is also anticipated for the new regional counselling centres, and – through the Ministry of the Interior – the development of new pre-primary schools in the four largest municipalities. Funds will also be used for curriculum development and the development of digital training materials, as well as to support new apprenticeships for 6 000 VET students (see Table 3.4). Overall, the review team considers that the current Operation Programme offers a better balance between large investment drives (e.g. investment in the modernisation of infrastructure), which may not always take into account future operational costs, and investment in policies affecting teaching and learning more directly.

It is also expected that the implementation of the new Operational Programme will overcome the challenges identified in the implementation of previous operational programmes. This involves: the development of interventions with clear goals, based on well-identified policy priorities and with appropriate account of future needs; the inclusion of an important component of impact evaluation as part of the design of interventions; the development of adequate indicators to monitor the implementation of interventions; the establishment of transparent criteria for the choice of the interventions which benefit from funding; and devising strategies to ensure the financial sustainability of the interventions beyond the period of the operational programme.

Notes

1. It was beyond the remit of the review team's mission to examine the mechanics of these calculations but they undoubtedly also have important distributive consequences that need to be considered as the intergovernmental finance system evolves.
2. Estonian legislation considers local PIT income an "own revenue" when it should be considered a shared tax.
3. This may be so for at least two reasons. First, the grant for education provides substantially more money to smaller, more rural and generally poorer jurisdictions on the grounds that these jurisdictions must have smaller classes. Second, the allocation of investment grants frequently favours poorer jurisdictions that have not been able to build basic infrastructure in the past.

4. In addition, municipalities can receive extra specific support from the state on a contractual basis. Examples include support targeted at dormitories; additional support to Ida-Viru County for teacher salaries; funding for the Language Immersion Programme (*Keelekümblus*) and Estonian language extra classes for new immigrants and Russian-speaking students; and funding for the further development of talented students, teachers and school leaders.
5. See OECD (2011) for a more extensive and in some places more critical role of these planning efforts.
6. These programmes are: general education; vocational education; higher education; adult education; teacher and school leadership education; learning resources; study and career counselling; labour market and education co-operation; and school network (Ministry of Education and Research et al., 2014).
7. It is perhaps worth adding that at least some countries – such as Serbia – that did not decentralise education to local governments and where the national government remains responsible for both school networks and teacher employment have had an even harder time adjusting to demographic decline than those who did decentralise.
8. A more general overview of the use of EU Cohesion Funds in Estonia providing an historical perspective and some references to education can be found in Kondor-Tabun and Staehr (2015).

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Chapter 4

School organisation and operating schools in Estonia

This chapter analyses how school organisation and the approach to operating schools in Estonia can contribute to the effective use of resources at the school level. It analyses the profile of school leaders as well as how responsibilities for school organisation and operation are distributed in Estonian schools. Furthermore, it discusses school quality assurance and development, outreach to parents and communities and the use of school facilities. The chapter places particular emphasis on areas of priority for Estonia such as the lack of feedback school leaders receive, the need to sustain capacity building for school development, and the lack of attractiveness of the school leadership profession. It also reviews the factors that constrain human resource management by school leaders.

The statistical data for Israel are supplied by and under the responsibility of the relevant Israeli authorities. The use of such data by the OECD is without prejudice to the status of the Golan Heights, East Jerusalem and Israeli settlements in the West Bank under the terms of international law.

This chapter analyses how school organisation and the approach to operating schools in Estonia can contribute to the effective use of resources at the school level. Among other things, it considers how responsibilities for school organisation and operation are distributed; how school quality assurance and development are structured (e.g. school self-evaluation, externality in quality assurance); how school leadership is organised, distributed and prepared; how resources in schools are organised to create environments conducive to effective teaching and learning (e.g. organisation of learning, outreach to parents and communities); and how school facilities and materials are used to support such environments (e.g. use of school facilities outside instruction hours).

Context and features

In order to introduce a comparative perspective, where possible, results from international surveys are cited. However, these surveys were administered in lower secondary education and as such their results give an insight to the organisation of general education in Estonia and how this compares internationally. For the Estonian 15 year-olds who sat the PISA 2012 assessment, 75% of the students were in Year 9, 23% were in Year 8, 2% were already following upper secondary education in Year 10 and only 0.4% were following vocational education (OECD, 2013a, Tables IV.2.4 and IV.2.6).

A high level of equity and autonomy within the Estonian school system

Compared internationally, Estonian schools have a high level of equity (see also Chapter 1). The performance of 15 year-olds in Estonia varies far less according to which school they attend than is the case in the OECD on average.[1] At the same time, Estonia is one of the most decentralised school systems in terms of decision making. According to an international survey, in 2010-11, 76% of decisions were made at the school level in Estonia, compared to 41% on average in the OECD (OECD, 2012, Table D6.3). Estonia stood out internationally with schools having high levels of autonomy over the allocation of teaching staff (OECD, 2012, Table D6.10).

Regulatory frameworks for schools

Estonian schools operate within a national regulatory framework as well as a specific school framework (the school statutes). In 2010-11, 31% of the 76% of decisions made at the school level were made in full autonomy and the remaining 45% within a framework established by a higher authority (OECD, 2012, Table D6.3). The national regulatory framework specifies requirements such as the national curriculum including student assessment regulations, the maximum class size, minimum teacher salaries, etc. The area in which Estonian schools enjoy most autonomy is resource management (see Table 4.1).

Although the Ministry of Education and Research leads the national policy making process, Estonian schools have opportunities to participate in it. For example, in the case of a proposed new law or amendment to an existing law governing the organisation of schooling, the Ministry would draw up a proposal, including a text with reasoning and

Table 4.1. **Proportion of decisions taken at the school level in public lower secondary education, 2011**

	Estonia		OECD average		
	In full autonomy (%)	Within a framework set by a higher authority (%)	In full autonomy (%)	Within a framework set by a higher authority (%)	Other (%)
Organisation of instruction	33	67	39	30	6
Personnel management	25	50	16	12	3
Planning and structures	0	57	3	20	0
Resource management	67	6	21	10	1

Source: OECD (2012), *Education at a Glance 2012: OECD Indicators*, *http://dx.doi.org/10.1787/eag-2012-en*, Tables D6.4a and b.

justification of why this is necessary. School leaders and other stakeholders have a chance to contribute to the national policy making process via representative bodies, e.g. the Association of Heads of Pre-School Educational Institutions of Estonia, the Estonian Association of Heads of Schools. However, the Ministry of Education and Research may also co-operate with individual schools (Ministry of Education and Research, 2015a).

The school statutes stipulate general information on the school (name, location and places of operation) and the rights and duties of students, parents and school employees (Basic Schools and Upper Secondary Schools Act, Article 66). Also, the school statutes stipulate: the basic composition and function of school management and administration, including the function of the board of trustees and the school leader; the organisation of teaching and learning in the school, including the type and level of the education to be acquired in the school, the language or languages of instruction, the stationary or non-stationary studies carried out in the school or both and, where necessary, the classes and groups of students with special educational needs operating in the school; and the bases of organisation of the extracurricular activities carried out in the school.

The school statutes of a state school are established by the Minister of Education and Research and those of a municipal school by the procedures established by the school owner. All statutes are submitted to the board of trustees, teacher council and student council for comment.

Responsibilities for school organisation and operation

Most responsibilities for school organisation and operation lie at the local and school levels. Beyond its role in drawing up proposals for the regulatory framework, the Ministry of Education and Research exercises national supervision over the schooling and education activities of educational establishments and monitors compliance with national curricula and other education standards (Ministry of Education and Research, 2015a). National supervision is actually carried out by Departments of Education of County governments and municipalities also monitor the numbers of children in compulsory education and whether their requirements are met.

The Departments of Education of County governments formulate education development plans for the county and these would aim to influence how schools operate and organise their activities. Municipalities are responsible for organising school medical services and catering (Ministry of Education and Research, 2015a). School owners (municipality, state or private entity) are responsible for appointing the school leader, for approving the school statutes and for school closure.

However, the school leader and various representative bodies hold the major responsibilities for the organisation and operation of schools (see Table 4.2). Within the limits of his/her competence, the school leader is responsible for the organisation and effectiveness of teaching and education, other activities carried out in the school, the overall condition and development of the school, and the lawfulness and purposeful use of the funds (Basic Schools and Upper Secondary Schools Act, Article 71, Clause 1).

Table 4.2. **Advisory and decision making bodies in Estonian schools**

Body and composition	Function as stipulated in regulation
General education schools	
Board of trustees: School owner, teacher council (see below); and majority of members are representatives of parents, graduates and organisations supporting the school (and these must not be school employees); a representative of the student council if this exists (note that in upper secondary schools there must be a student representative).	Ensures joint activities (of the students, academic staff, owner, parents, graduates and organisations supporting the school) to guide, plan and observe teaching and education, and create better opportunities for teaching and education. For example, the board of trustees: • makes recommendations to the owner for better handling of school-related issues • participates in preparation of the School development plan • establishes the procedures for filling school staff vacancies • comments on the school leader's proposed school principles for staff remuneration • comments on proposed school curriculum and approves amendments to the list of subjects at school • comments on school leader (SL) proposal on procedures for school self-evaluation • comments on the draft budget • comments on draft admission conditions and any amendment to school rules • comments on draft procedures for development conversations • approves SL proposal to exceptionally increase size of a specific class beyond the maximum • assesses the needs and work organisation of hobby activities, long day groups and board school facilities.
Teacher council: School academic staff.	Organises, analyses and assesses teaching and education; makes decisions necessary for managing the school. For example, the teacher council: • participates in the preparation of and comments on the school development plan • comments on proposed school curriculum • decides if a student must repeat a grade (must involve the student or his/her legal representative).
Governing body: School leader and school council.	These are present in **private** basic schools.
Vocational education schools	
Council: School leader; School deputies; heads of structural units in the school and employees responsible for broad study groups; student representative and a trustee of the employees.	School leader forms the council (pursuant to the procedure provided for in the school's statutes) and manages the Council's work. The Council's mandate is to: • organise school activities and plan school development • develop school development plan for school leader approval • approve school annual report; rules for organisation of school studies; school work and training schedules; school curricula; school internal assessment report; school budget; statutes for school's student body • report on the execution of the budget and procurement plan • propose amendments to the school statutes.
Advisory body: At least seven members that connect the school and society.	School leader forms the advisory body for five years. Its mandate is to: • comment on annual school report and proposals for the right to provide instruction in a new curriculum group • assess the organisation of work practice at school, institutions and enterprises • assess school co-operation with state and municipal authorities and enterprises upon achievement of objectives in the school development plan • make proposals for school development, activity, assets, budget, management and amendments to school statutes.

Sources: Ministry of Education and Research (2015), *OECD Review of Policies to Improve the Effectiveness of Resource Use in Schools: Country Background Report for Estonia*, *www.oecd.org/education/schoolresourcesreview.htm*; and Parliament of Estonia (2010), Basic Schools and Upper Secondary Schools Act, Tallinn, *www.riigiteataja.ee/en/eli/ee/519032015002/consolide/current*.

Resource management

International survey data indicate that in 2010-11, Estonia was one of 11 out of 35 education systems in the OECD where schools had full autonomy over the hiring and dismissal of teachers (OECD, 2012, Table D6.8) (see also Chapter 5). In Estonian general education schools (primary schools, basic schools, full cycle schools, *gymnasiums*), the school leader has a high level of responsibility for the appointment and dismissal of academic staff. The school leader concludes employment contracts with teachers and other employees and approves the composition of the school employees pursuant to the procedure established by the owner of the school. This is confirmed by Estonian school leader reports in PISA 2012 (see Figure 4.1). At vocational schools, the school leader also enters into contracts of employment with school employees.

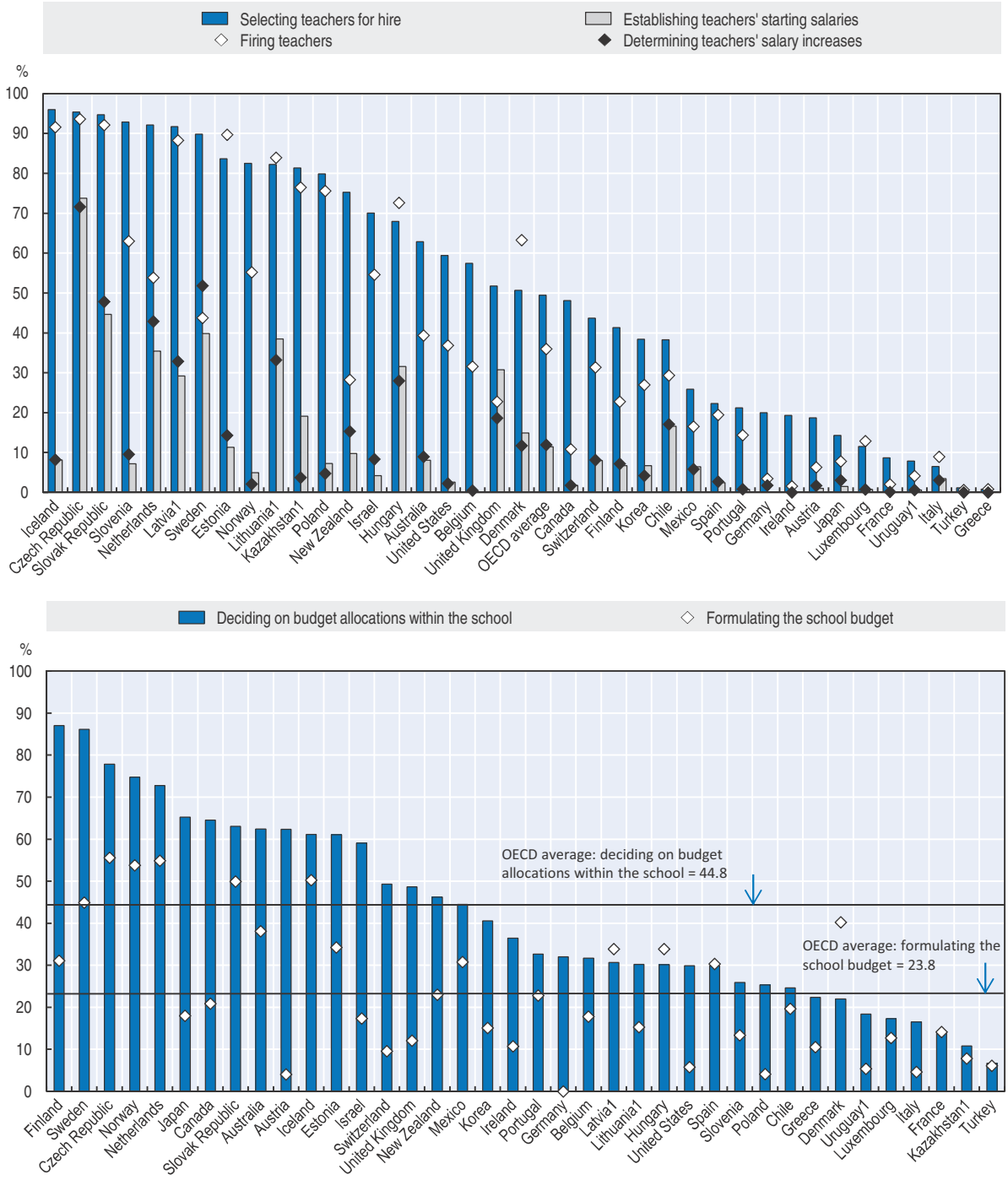
Equally, Estonian schools have autonomy over setting the duties, conditions of service and salaries for both teachers and non-teaching staff (OECD, 2012, Table D6.8). While the school leader in general education schools establishes the school's principles of remuneration, he/she shares them with the teachers and the board of trustees for comment, and then submits these to the school owner for official approval. The Minister of Education and Research also sets a national requirement on the minimum salary for teachers (see Chapter 5). Therefore, as can be seen from school leader reports in PISA 2012, responsibility for establishing teachers' starting salaries and salary increases does not lie solely with the school academic staff (Figure 4.1).

Using the national curriculum as a basis, the school leader has freedom to allocate the teacher's teaching time within the full-time working load of a 35-hour work week (pursuant to the Working Time of Educational Staff Act). This includes both contact hours (direct teaching) and other tasks as specified in the employment contract (Basic Schools and Upper Secondary Schools Act, Article 75, Clause 2). As of 1 September 2013, there is no longer a specified minimum number of contact hours for teachers. The Ministry uses 35 working hours to calculate the minimum teacher salary. During the OECD review, teacher representatives communicated that a strong teacher council within a general education school can influence the allocation of working hours within the school.

Each Estonian pre-primary institution and school must have its own budget (see also Chapter 3). In the case of a private pre-primary institution or school, this must be separate from the accounts of the owner's other institutions and businesses. The school leader represents the school and allocates the budget within the school respecting the regulatory framework of the Basic Schools and Upper Secondary Schools Act and the school statutes. Compared internationally, Estonian school leaders in general education have higher levels of autonomy for deciding on budget allocations within the school (Figure 4.1). This is also the case for formulating the school budget. In all Estonian schools, the school leader plans the budget. In a municipal school, the board of trustees comments on this and the municipality approves it. In a state school, the school budget is approved by the Minister of Education and Research. In a vocational school, the school leader must also prepare a budget and procurement plan and this must be approved by the Council. There is a National Accounting Act and most municipal schools have their accounts done by the municipality. There is a central accounting database into which all municipalities must enter payroll information at the end of each month (see Chapter 3 for a full overview of school funding).

Figure 4.1. **School leader reports on school responsibility for resource management, 2012**

Percentage of 15-year-old students in schools whose leader reports only he/she and/or teachers are responsible (PISA 2012) for:



1. Not a member of the OECD. Kazakhstan, Lithuania and Uruguay are participants in the OECD School Resources Review.

Source: OECD (2013a), *PISA 2012 Results: What Makes Schools Successful (Volume IV): Resources, Policies and Practices*, *http://dx.doi.org/10.1787/9789264201156-en*, data for Figure IV.4.2.

School quality assurance and development

Estonian school leaders carry the major responsibility for school quality assurance and development. The school leader is responsible for drawing up and implementing the school development plan; approving the school curriculum; and approving the procedure for internal evaluation of the school (Article 71, Clauses 1, 2, 8 and 9). In this way, school leaders are expected to play a central role in the development of the school self-evaluation and development processes. According to recent research, representatives of municipalities reported that both very strong and weak school leaders could significantly influence school development (Põder et al., 2014). Requirements for school development planning and self-evaluation, however, envision the active participation of school representative bodies (see Box 4.1).

Box 4.1. **School development plans and self-evaluation in Estonia**

Estonian schools are required to draw up a School Development Plan (SDP) for a period of at least three years, specifying: school goals and objectives; directions for school development (including ensuring safety at the school); and student learning. The purpose of drawing up a SDP is to ensure the consistent development of the school (Basic Schools and Upper Secondary Schools Act, Article 67, Clause 1).

The SDP should be prepared in co-operation with the board of trustees, teacher council, student council and experts from the school or external experts; the school owner must approve the SDP; and the school leader must arrange for the publication of the SDP on the school website (Basic Schools and Upper Secondary Schools Act, Article 67, Clauses 2 and 3). The SDP should provide the school activity plan. In a school where the language of instruction is not Estonian, the SDP must include measures to ensure that basic school graduates are able to continue studies in the Estonian language.

The school must undertake an internal evaluation at least once over the period of the SDP. The school leader proposes a procedure for internal evaluation and submits this to the board of trustees for comment. Internal evaluation is a continuous process, the objective of which is to ensure conditions supporting the development of the student and continuous development of the school. For that, the strengths and areas for improvement are specified, which is the basis for preparing the SDP. Internal evaluation should pay attention to teaching, education and management and evaluate their effectiveness (Basic Schools and Upper Secondary Schools Act, Article 78, Clause 1).

Source: Parliament of Estonia (2010), Basic Schools and Upper Secondary Schools Act, Tallinn, *www.riigiteataja.ee/en/eli/ee/519032015002/consolide/current*.

Staff professional development

There is a systematic allocation of central funding to support teachers' and school leaders' professional development activities. Until 2015, this equated to 1% of the central allocation for the labour costs of school leaders and teachers and amounted to EUR 1.8 million in 2014. As of 2015, funds for professional development are determined on the basis of a per student model (see Chapter 5). This amount is allocated to the local level (in the case of municipal schools) for distribution to the respective schools (see also Chapter 3). If the training needs of teachers and school leaders are covered, this support may be used for their remuneration (Ministry of Education and Research, 2015a). An international survey in 2010-11 indicates that Estonia is one of only 7 out of 36 education

systems within the OECD where schools make decisions on the allocation of resources for both school leader and teacher professional development (OECD, 2012, Table D6.10). Twenty-three education systems in the OECD set requirements for teacher professional development, but only eight of these, including Estonia, have a separate school budget allocated for professional development (see Table 4.3).

Table 4.3. **The school's role in deciding teachers' professional development activities, lower secondary education, 2013**

	Who decides the professional development activities undertaken by individual teachers?						Separate school budget allocated	Requirements for professional development planning
	Teacher	School management	Inspectorate	Local/municipal education authorities	Regional/ sub-regional education authorities	Central/state education authorities		
Austria	Proposes	Decides	Decides	No role	a	No role	No	No plan
Czech Republic	Proposes	Decides	No role	No role	No role	No role	Yes	School plan
Hungary	Proposes	Decides	a	Validates	No role	No role	m	School plan
Portugal	No role	Decides	No role	No role	No role	No role	No	Teacher and school plan
Belgium (Fr.)	Proposes	Validates	No role	No role	No role	No role	No	Teacher and school plan
Estonia	Proposes	Validates	a	Proposes	a	No role	Yes	Teacher plan
Finland	Proposes	Validates	a	a	No role	No role	m	No plan
Germany	Decides	Validates	No role	No role	No role	No role	Yes	No plan
Israel	Proposes	Validates	No role	Other	No role	No role	No	Teacher and school plan
Poland	Proposes	Validates	Proposes	Validates	Proposes	Proposes	No	Teacher and school plan
Slovenia	Proposes	Validates	No role	a	a	Decides	Yes	Teacher and school plan
Turkey	Proposes	Validates	Proposes	Proposes	Decides	Decides	No	Teacher plan
Chile	Decides	Proposes	a	Proposes	a	Proposes	Yes	m
England	Proposes	Proposes	Proposes	No role	a	No role	a	Teacher and school plan
Greece	Proposes	Proposes	Decides	No role	Decides	Decides	No	School plan
Iceland	Decides	Proposes	a	No role	a	No role	Yes	School plan
Japan	Proposes	Proposes	a	Validates	Validates	Validates	Yes	Teacher and school plan
Scotland	Proposes	Proposes	No role	Proposes	a	No role	m	Teacher plan
Slovak Republic	Decides	Proposes	No role	No role	No role	No role	Yes	Teacher and school plan
Korea	Proposes	No role	No role	No role	Decides	Decides	No	Teacher and school plan
Luxembourg	Decides	No role	No role	No role	No role	Validates	No	No plan
Mexico	Decides	No role	No role	No role	No role	Decides	No	Teacher and school plan
Spain	Decides	No role	No role	No role	Proposes	No role	No	No plan

Notes: The figure presents information on requirements for teachers in lower secondary education. "Proposes" = Proposes the activities; "Validates" = Validates the choice; "Decides" = Decides in full autonomy; m = Missing; a = Does not apply.
Source: OECD (2014a), *Education at a Glance 2014: OECD Indicators*, *http://dx.doi.org/10.1787/eag-2014-en*, Tables D7.1c and D7.2c.

62% of Estonian 15-year-old students were in schools where mathematics teachers had reportedly attended a programme of professional development with a focus on mathematics during the previous three months, compared to 39% on average in the OECD (OECD, 2013a, Table IV 3.12) (see also Chapter 5 for further information about the professional development of teachers).

School leaders

Qualification requirements and appointment

School leaders ("the head of the school" or "school director") are employed by the school owner. In vocational schools, the school owner is typically the state, but may also be a private entity or a municipality (see Table 1.6). For schools providing general education, the school leader in a municipal school may be employed by the rural municipality or the city mayor, the school leader in a state school is employed by the Minister of Education and Research, and a school leader in a private school is employed by a private entity. In the case of mayors and the Minister, an authorised official may actually conclude the contract.

A public competition must be organised to fill a vacant position of school leader and this must be declared by the school owner (Basic Schools and Upper Secondary Schools Act, Article 71, Clauses 4 and 5). The school owner announces an open position of school leader, draws up a proposal of recruitment procedures and submits this to the board of trustees for comment (idem, Clause 6). Applicants must meet the qualification requirements set by the Minister of Education and Research: school leaders must have tertiary education qualifications and leadership competences. However, school owners may specify additional requirements. For example, the OECD review team visited the municipality of Jõhvi that has set competency criteria of knowledge of computers and at least conversational Russian and preferably ability in one more language.

The Basic Schools and Upper Secondary Schools Act does not specify any requirements on the length of contract for a school leader. In public schools, school leaders are appointed for an unspecified term (OECD, 2013b, Table 7.A.2).

Salaries

The school owner determines the school leader's salary. Estonia is one of only 9 out of 35 education systems in the OECD where school leader salaries and conditions of service are determined at the local level (alongside Chile, the Czech Republic, Finland, Hungary, Iceland, Norway, Poland and Sweden) (in two other systems – England and the Netherlands – these decisions are made at the school level) (OECD, 2012, Table D6.8). According to Ministry of Finance data, in 2012 the average monthly salary for a school leader in an Estonian public school was EUR 1 140 and it was EUR 870 in an Estonian public pre-primary school (Ministry of Education and Research, 2015a, Table 22). Eurydice data give the annual average actual salary for an Estonian school leader as EUR 14 833 in 2013-14, that is, EUR 1 236 per month (Eurydice, 2015).

As is the case for teachers, the salaries of school leaders are paid by the school owner and, in the case of municipal schools, derive from the central funding allocation to municipalities which is primarily based on the number of students at the school (see Chapter 3) (while, in pre-primary education, are mostly based on municipal own resources). During the visit, the OECD review team learned that municipalities may keep in reserve a small proportion of the centrally allocated funding for teacher and school leader salaries and use this at the end of the year to reward school leaders and other staff that have been successful on locally specified criteria.

Profile of school leaders

In 2013-14, there were 943 full-time equivalent management staff in Estonian general education schools (at the primary, lower secondary and upper secondary levels, including special schools and adult upper secondary education), a 6% decrease relative to the 1 001 full-time equivalent management staff in 2010-11 (data from the Estonian Education Information System, *http://ehis.hm.ee*). Overall, this means there is 1.7 management staff per school in Estonia.[2] Typically, in addition to school directors and their deputies, Estonian schools employ "head teachers" who have responsibility for teaching and learning within the school. In schools visited during the OECD review this position was typically called "Pedagogical Programmes Co-ordinator". Larger schools may also employ a "financial manager" who would take responsibility for daily school management (Ministry of Education and Research, 2015a). According to the OECD TALIS (OECD Teaching and Learning International Survey) 2013 sample,[3] the ratio of teachers to management or administrative personnel in Estonian lower secondary schools was 6.7, compared to the international average of 6.3 (OECD, 2014b, Table 2.18).

According to the OECD TALIS 2013 sample, the Estonian school leaders in schools providing lower secondary education were on average 0.7 years older than their counterparts in other countries (OECD, 2014b, Table 4.3).[4] In contrast to 2008, the TALIS sample in 2013 indicates a higher proportion of Estonian school leaders who are aged 60 years or older and a smaller proportion of younger school leaders (OECD, 2014b, Table 4.3). The annual statistics report only provides a gender and age breakdown for teachers in general education and does not show this for school leaders, but in 2013, 26% of teachers were older than 55 years (Statistics Estonia, 2014, Table 5).

Female school leaders are in majority in Estonian schools. Compared to other countries, the proportion of female school leaders at the lower secondary level in Estonia is higher (by ten percentage points) (Table 4.4).

Table 4.4. **Profile of Estonian school leaders in international comparison, TALIS 2013 and 2008**

In schools providing lower secondary education (ISCED 2)

	2013		2008	
	Estonia (%)	Average in TALIS (%)	Estonia (%)	Average in TALIS (%)
Aged 60 years +	22.3	17.1	9.4	11.5
Aged under 40 years	5.1	7.2	11.3	9.5
Mean age	52.2 years	51.5 years	-	-
Females	60.2	49.9	56.4	47.0
ISCED 5A qualification	95.9	92.7	97.6	92.8
ISCED 6 qualification	1.5	3.3	1.2	1.3
Employed full-time and teaching	25.4	35.4	-	-
Employed full-time, but not teaching	69.5	62.4	-	-
Employed part-time and teaching	3.0	3.4	-	-

Source: OECD (2014b), *TALIS 2013 Results: An International Perspective on Teaching and Learning*, *http://dx.doi.org/10.1787/9789264196261-en*, Tables 3.8, 3.8c, 3.9c and 3.13.

Organisation of learning within schools

Schools are fully responsible for the organisation of learning, although there is a regulatory framework that covers many of the organisational aspects (see Table 4.1). The

Basic Schools and Upper Secondary Schools Act (Article 6) stipulates that schools (as well as the school owners) adhere to the following principles when organising learning:

1. General education of good quality is equally available to all persons regardless of their social and economic background, nationality, gender, place of residence or special educational needs.
2. There are no curricula-based impediments to the movement of students from one stage of study, form of study or level of education to another.
3. Upon organisation of their activities, schools act on the basis of the expectations of society as expressed in national curricula and the needs and interests of students, taking into account the proposals of the students and parents as well as the characteristics of the region.
4. The needs and interests of students are taken into account upon designing the curricula of schools and implementing individual curricula.

The remainder of this section presents the major regulations that impact the organisation of learning.

School curriculum and assessment

Each school draws up a curriculum based on the national curricula prepared by the Ministry of Education and Research. The national curricula set goals and objectives for studies and expected learning outcomes (see also Chapter 1). They also include details on student assessment criteria, with numeric grades and also descriptors that can be used instead of numeric grades for student assessment in stages I and II of compulsory education (Years 1 to 6). The school leader is responsible for establishing the school curriculum and submits the proposed school curriculum (or any amendment to an existing school curriculum) to the board of trustees, teacher council and student council for comment.

There are indications that general education schools would like more flexibility in how they develop their school curriculum and assessment (some stakeholders have raised the challenge that national curricula in general education are "too large and concentrating on facts", Ministry of Education and Research, 2015a).

For vocational education, new output-based curricula started being progressively introduced as of 1 September 2013 based on professional standards (see also Chapter 1). The new vocational curricula aim to be more practical, shorter and allow a more flexible organisation of learning and are mapped to five different qualification levels of the national qualifications framework (see Annex 11 in Ministry of Education and Research, 2015a).

Organising lessons and classes

The Ministry of Education and Research determines the length of an academic year and of a lesson. The national requirements on the number of lessons that children should follow each week increase gradually with age, from 20 lessons in Year 1 to 32 lessons in Years 8 and 9 (see Ministry of Education and Research, 2015a, Section 5.2). In upper secondary education, a weekly number of lessons is not set, but the minimum academic workload is 96 courses with each course corresponding to 35 lessons in a given subject, that is 3 360 lessons in total during three years.

The maximum number of students in a class is regulated (see Table 4.5). There is a provision for smaller schools to merge classes which have less than 16 students and the school owner may increase the maximum class size on an exceptional basis for one academic year in a specific class, if all health and safety requirements are met (Ministry of Education and Research, 2015a). While there is no maximum class size noted for upper secondary schools in the Basic Schools and Upper Secondary Schools Act, the Ministry of Education and Research (2015) advises that this is set at 36 students. In the new network of state-run upper secondary general schools, it is planned to set the maximum number of students in a class at 28 students for small schools (planned for 252 students), 30 students for medium-sized schools (planned for 360 students), and 36 students for schools located in larger towns (planned for 540 and 750 students).

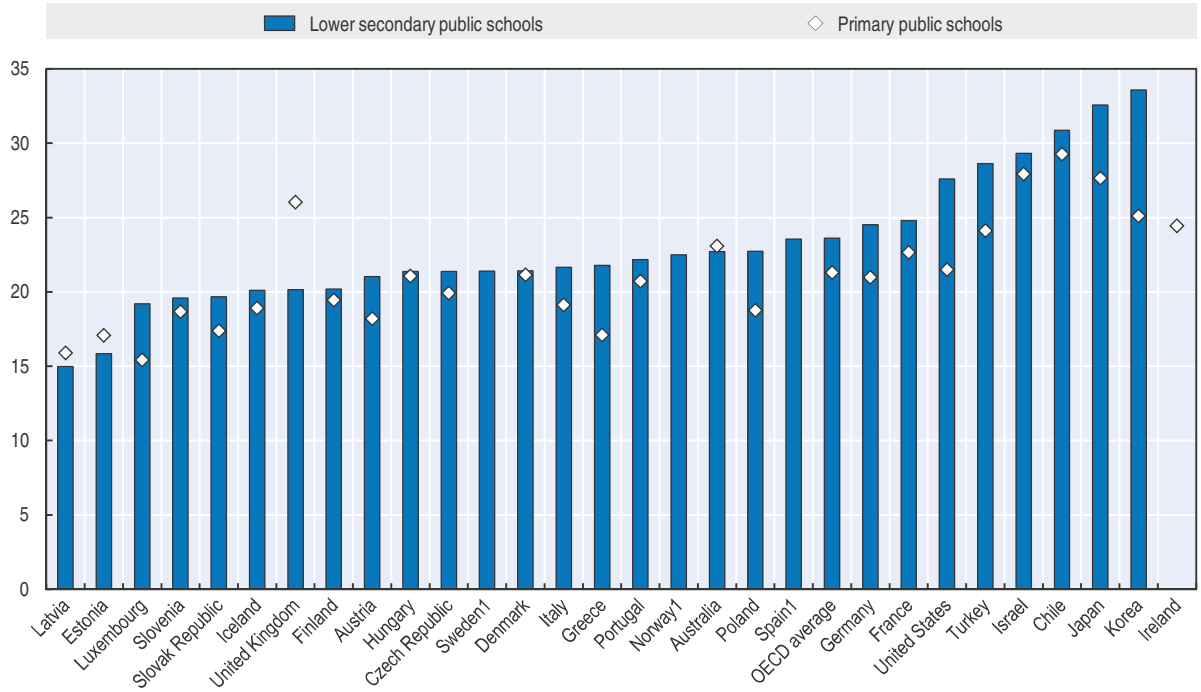
Table 4.5. **Regulations on class size in Estonian schools**

	Maximum number of students
Type of class	
Basic school class or study group School owner may set a lower maximum number of students School owner may set a higher maximum number of students on an exceptional basis as proposed by the school leader and approved by the board of trustees, with the exception of classes listed below	24
Classes for students with behavioural problems acquiring basic education	12
Classes for students with severe somatic illnesses	12
Classes for students with a speech impairment, visual impairment, hearing impairment or physical/motor disability	12
Classes for students with specific learning difficulties acquiring basic education	12
Classes for students with mild learning difficulties acquiring basic education	12
Classes for students with educational problems acquiring basic education	12
Classes for students with emotional and behavioural disorders acquiring basic education	8
Remedial instruction groups for students acquiring basic education for provision of special education or speech therapy assistance	6
Classes for students with multiple disabilities acquiring basic education	6
Classes for students with moderate learning difficulties acquiring basic education	6
Classes for students acquiring basic education whom the counselling committee has, based on their specific educational needs, recommended studying in a small class, including students with autism spectrum disorders, activity and attention disorders or addiction disorders or students whose talent in combination with another special need results in the need to study in a small class	4
Classes for students with severe and profound learning difficulties acquiring basic education	4
Rules for forming composite/mixed classes	
Basic schools may form a composite/mixed class if the total number of students in two or three classes is 16 or less	..
Two or three classes of students with special educational needs may be merged	12

.. Not available.
Source: Parliament of Estonia (2010), Basic Schools and Upper Secondary Schools Act, Tallinn, *www.riigiteataja.ee/en/eli/ee/519032015002/consolide/current*, Articles 26 and 51.

For general education, the average class sizes are much lower than the stipulated maximum at all levels of education. In 2013-14, the average primary class had 18.4 students, the average lower secondary class had 17.9 students and the average upper secondary class had 23.9 students (Ministry of Education and Research, 2015a, Figure 64) (excluding private schools and classes for special needs students in both special and mainstream schools). In 2013, Estonian school leaders reported that the average class size at lower secondary level was 17 students. Among OECD countries, Estonia has one of the lowest reported class sizes (see Figure 4.2). According to Estonian student reports in the PISA 2012 assessment, the average class size in schools located in rural areas (less than

Figure 4.2. **Average net area per student (m^2) across school types, general education, 2012**



1. Data as reported by school leaders in TALIS 2013. Note that in Estonia school leaders reported an average class size of 17 students.
Sources: OECD (2014b), *TALIS 2013 Results: An International Perspective on Teaching and Learning*, *http://dx.doi.org/10.1787/9789264196261-en*, Table D2.1; and OECD (2014a), *Education at a Glance 2014: OECD Indicators*, *http://dx.doi.org/10.1787/eag-2014-en*, Table 2.18.

3 000 inhabitants) was 14.9 students and it was 23.4 students in schools located in a city (over 100 000 inhabitants). In the OECD on average, the class sizes were 20.1 students and 24.6 students respectively (OECD, 2013a, Table IV.3.24). Out of the 210 Estonian municipalities, 117 have only one school and the average class size in these municipalities is 11.4 students in Years 1 to 6, 11.1 students in Years 7 to 9 and 15.1 students in Years 10 to 12 (see Table 3.8).

Educational materials

The Basic Schools and Upper Secondary Schools Act stipulates that schools shall provide students the use, free of charge, of all necessary reference books (textbooks, work exercise books and worksheets) needed to complete the school's curriculum. The Ministry of Education and Research will ensure schools have access to the minimum number of reference books necessary for the completion of national curricula. The school itself can choose the reference books needed in each class for the completion of the school's curriculum. In 2014, EUR 57 per student, i.e. a total of EUR 7.5 million were allocated as support for reference books and other teaching aids (Ministry of Education and Research, 2015a).

According to Estonian school leader reports in both TALIS 2013 and PISA 2012, there are concerns with the instructional materials in many schools and this is more frequently reported than internationally (see Table 4.6). In the PISA 2012 mathematics assessment, there was a performance disadvantage of 18 score points (12 once student and school characteristics were taken into account) in Estonian schools using the same textbook in all

Table 4.6. **School leader reports on concerns with school educational materials**

	Instructional materials (%)	Computers for instruction (%)	Internet access (%)	Computer software for instruction (%)	Library materials (%)
TALIS 2013: percentage of lower secondary teachers whose school leader reported the following hindered the school's capacity to provide quality instruction					
Estonia	51	35	13	33	29
International average	26	38	30	38	29
PISA 2012: percentage of students in schools whose school leader reported the following hindered student learning					
Estonia	40	37	4	32	36
OECD average	20	34	21	32	26

Sources: OECD (2014b), *TALIS 2013 Results: An International Perspective on Teaching and Learning*, *http://dx.doi.org/10.1787/9789264196261-en*, Table 2.19; and OECD (2013a), *PISA 2012 Results: What Makes Schools Successful (Volume IV): Resources, Policies and Practices*, *http://dx.doi.org/10.1787/9789264201156-en*, Figure IV.3.8.

mathematics classes, although this was not associated with any performance difference in the OECD on average (OECD, 2013a, Tables IV.1.12b and c). Stakeholders raised the need for more state funding for learning materials (Ministry of Education and Research, 2015a).

The availability of computers in Estonian schools is around the OECD average, as reported by school leaders (OECD, 2013a, Table IV.3.18), although Internet access appears to be comparatively better in Estonian schools (see Table 4.6).

School admission and student transfer policies

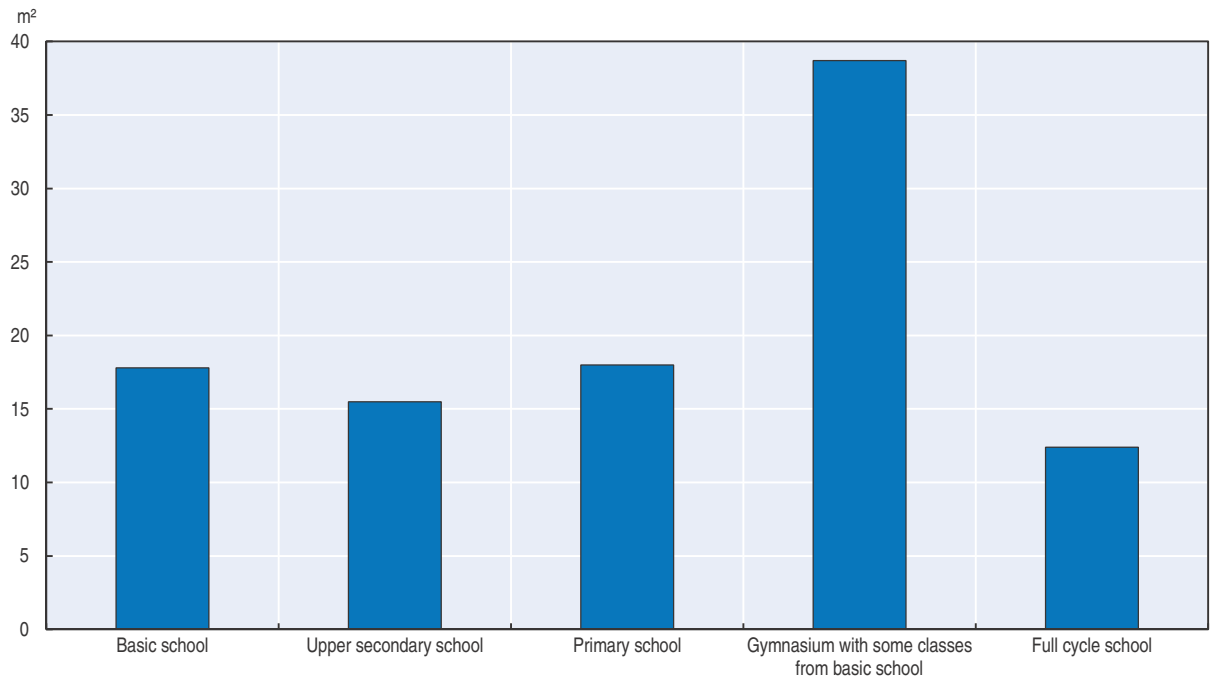
Estonian schools are required to admit all first graders for whom it is the "school of residence", that is, they are assigned to that school according to where they live. However, Estonian parents are free to choose a different school for their child or children, if that school has a free place and, in the case of a private school, if they are willing and able to pay the school fees. The Basic Schools and Upper Secondary Schools Act (Article 27, Clause 3) allows for upper secondary schools to select students according to their academic skills, as long as their admission criteria are objective and have been published. However, there are certain schools to which municipalities do not assign students and these schools can therefore administer tests to select students (Ministry of Education and Research, 2015a). In the PISA 2012 sample, 37% of 15-year-old Estonian students were in a school that always considered students' records of academic performance for admission to the school, which is around the OECD average of 39% (OECD, 2013a, Table IV.2.7). This was associated with a performance advantage of 9 score points in the mathematics assessment, compared to a 6 score point advantage on average in the OECD – although once student and school characteristics were taken account of there was no performance difference in academically selective Estonian schools (OECD, 2013a, Tables IV.1.12b and c).

School leaders make the decision on which children to enrol at the school and also on which students to expel (Basic Schools and Upper Secondary Schools Act, Articles 27 and 28). Compared internationally, Estonian schools are less likely to transfer students with behavioural problems, but are more likely to transfer students with special learning needs. The percentage of students whose school leader reported this was "not likely": 74% in Estonia, 58% in the OECD on average for behavioural problems; 57% in Estonia, 72% in the OECD on average for special learning needs. Only 4% of Estonian students were in a school where the school leader reported the transfer of a student due to low academic achievement, behavioural problems or special learning needs was "very likely", compared to 13% on average in the OECD (OECD, 2013a, Table IV.2.9).

Distribution and use of school facilities

A school offering general education typically has one building for studies and other activities. The majority of schools have a building with sport facilities. Most buildings are in a satisfactory condition to enable the organisation of schooling, but will need investment in the next five years (Ministry of Education and Research, 2015a). On average, in the 2013-14 school year, an Estonian general education school had 265 students and an average net floor area of 3 918 m^2, meaning just under 15 m^2 of net area per student (Ministry of Education and Research, 2015a). Figure 4.3 provides the comparison of average net area per student across school types. The Ministry of Education and Research has a long-term goal that the use of area, excluding sports facilities, boarding school facilities and ancillary buildings, in general education schools would be less than 10 m^2 of net area per student by 2020. This is currently the case in less than one-third of general education schools (Ministry of Education and Research, 2015a).

Figure 4.3. **Average net area per student (m^2) across school types, general education, 2013/14**



Source: Ministry of Education and Research (2015), *OECD Review of Policies to Improve the Effectiveness of Resource Use in Schools: Country Background Report for Estonia*, *www.oecd.org/education/schoolresourcesreview.htm*.

There may be challenges for schools in rural areas to cover their operational costs, e.g. support staff and maintenance of the building. In comparison to larger municipalities, smaller municipalities pay a larger contribution to general education expenses (see Chapter 3). This is in part explained by the maintenance of school buildings that are no longer filled to capacity, due to fewer students in some localities. Parts of the school building may no longer be used, but still need to be maintained and heated to a minimum and "a vast amount of resources" is spent on this (Ministry of Education and Research, 2015a). However, reports from Estonian school leaders in rural areas (less than 3 000 people) on the quality of the physical infrastructure in their schools were more positive than by their counterparts in other schools (OECD, 2013a, Table IV.3.15).

As part of their duties to support the development of students, schools are able to form "long day groups" in the school for students following regular instruction. This is often driven by demand from working parents, who work until 5 pm (Ministry of Education and Research, 2015a). The board of trustees would prepare a proposal for "long day groups" and this would be approved by the school owner. Once approved, the school statutes specify the basis for organising extracurricular activities at the school. The school leader is in charge of organising and implementing this. "Long day groups" allow schools to offer extracurricular activities with supervision and pedagogical instruction and guidance to students in spending spare time, doing homework, pursuing hobbies and developing their interests (Basic Schools and Upper Secondary Schools Act, Article 38, Clause 1). Such activities are planned and organised paying attention to the age of students, their home lives, availability of transport facilities and the school's overall teaching and education goals. According to school leader reports in PISA 2012, the provision of extracurricular activities by Estonian schools is common place (see Table 4.7). Schools may also offer "hobby activities" and students have "the right to use the civil engineering works, rooms and library of their school and the teaching and learning, sports, technical and other facilities of the school pursuant to the procedure provided for in the internal rules of the school" (Basic Schools and Upper Secondary Schools Act, Article 40, Clause 2). Students in long day groups must be provided an additional lunch at school which is paid for by the parents (Ministry of Education and Research, 2015a).

Table 4.7. **Extracurricular activities offered by schools**

As reported by school leaders in PISA 2012

	Estonia (%)	OECD average (%)
Band, orchestra or choir	83	63
School play or school musical	58	58
Art club or art activities	75	62
Sporting team or sporting activities	97	90
Volunteering or service activities	84	73
Mathematics competitions	92	67
Computers and ICT club	42	38

Source: OECD (2013a), *PISA 2012 Results: What Makes Schools Successful (Volume IV): Resources, Policies and Practices*, *http://dx.doi.org/10.1787/9789264201156-en*, Table IV.3.30.

Strengths

Schools benefit from a high level of autonomy with a strong role for school leaders and staff in practice

Compared to other OECD countries, Estonian schools enjoy higher levels of autonomy in all major aspects of school organisation and operation, and particularly with regard to personnel and resource management (see Table 4.1). Estonian school leaders in lower secondary education report that in practice the hiring and firing of staff is a matter for the school leader and teachers with no external involvement (see Figure 4.1). This is also largely the case for deciding on budget allocations within the school (see Figure 4.1), although the board of trustees (the majority of members are parents and other people external to the school) comments on the draft school budget and this is approved by the school owner (also represented on the board of trustees). In vocational schools, the Council approves the school budget and this largely comprises the school leadership team, although it does include an external member to the school (a trustee of the employees) (see Table 4.2).

Schools have considerable flexibility in how to organise and deliver the national core curriculum

Estonian schools (both public and private) develop a specific school curriculum based on the national curricula. In general education, the national curricula specify national learning outcomes, first for general skills, then for different study areas. These are defined for basic education in three blocks of learning periods: stage I (Years 1 to 3); stage II (Years 4 to 6); and stage III (Years 7 to 9). National learning outcomes for general upper secondary level (Years 10 to 12) are defined in national curricula for *gymnasiums*. Schools can decide on how to organise educational content within a regulated number of hours for each school Year. Some schools also offer instruction in the Russian language. In such schools, the entire national curricula are delivered in Russian, but there is an additional compulsory component of instruction in the Estonian language.

The national curricula for vocational education have been recently revised to introduce a higher degree of flexibility for schools. During the OECD review, representatives from the Ministry commented that this followed discussions in 2010 with schools on which methodologies in vocational education would need more flexibility to increase effectiveness of instruction. Vocational education comprises 180 study credits with 30 credits in general subjects. There are different modules that a vocational school can choose to offer in its school curriculum.

The design of the national curricula aspires to allow schools the freedom to offer a particular educational profile, while ensuring the delivery of core, compulsory content. While some concerns were noted by stakeholders over the content in the general education curricula (Ministry of Education and Research, 2015a), the OECD review team saw examples of schools designing a specific educational profile. For example, a school offering three streams of general upper secondary education (health care; enterprise; European integration) and these subjects were woven into subjects in primary and lower secondary education from Year 1.

Schools play a role in determining teacher salaries and rewards

During the OECD review, representatives from the Ministry reported that there was a deliberate decentralisation strategy to make the school leader the key figure for human resource management. There are no longer centrally specified contact hours (direct teaching) for teachers; the school leader establishes this in a contract with each teacher. The aim of introducing an approach on the overall working time for teachers (35 hours) is "to spread the actual working time among teachers in a more even manner and this will motivate teachers to participate more in developmental activities in the school" (Ministry of Education and Research et al., 2014).

The central funding allocation for teacher salaries is based on the minimum salary (calculated on the basis of 35 working hours a week), with an additional 20%. This aims to introduce flexibility at the school level for the school leader to adjust salaries or allocate additional compensation. During the OECD review, representatives from the Ministry reported that in schools with an efficient teacher/student ratio, there would be a good level of funding available for school leaders to financially reward teachers. Each school sets its own teacher pay scale. These are relatively new responsibilities at the school level and their potential may not yet be fully understood, but they are designed to introduce greater flexibility for school leaders to reward good teaching.

During the OECD review, representatives from Tartu City reported that school leaders were given full autonomy in matters of teacher hiring, promotion and remuneration, but that the municipality controlled the school budget, which includes a specific line for "teacher salary – additional compensation". However, they also reported that generally there is not much financial room within school budgets for school leaders to make use of this possibility. Schools visited during the OECD review reported using different ways to reward teachers, including praise and moral recognition, special trips and in one school a common financial contribution from each member of staff with the winnings going to "the golden teacher" nominated by the staff. There is also an annual reward programme (Annual Teachers Gala "Estonia learns and appreciates") for which teachers and school leaders can be nominated at both the county and national levels (see *www.hm.ee/gala*). In all schools visited during the OECD review, the culture was accepted that there would be individual negotiation between the school leader and each teacher regarding his/her salary. Representatives from the Estonian Association of Teachers reported that it had developed recommendations on which qualifications should be associated with salary increases.

Schools have the ability to generate extra income

Most general education schools make use of their facilities for extracurricular activities or for other community activities (Ministry of Education and Research, 2015a). General education schools can generate extra income by offering the use of their facilities, but this is typically for a modest fee and often local residents are not charged a fee (Ministry of Education and Research, 2015a, Section 5.8). Schools can receive donations and during the OECD review some schools reported they had a separate account for this. In Tartu, municipal schools appeared to be able to keep an agreed percentage of the income generated from renting out school facilities, with the city taking the remaining income.

The vocational schools visited during the OECD review appeared to be successful in generating additional income. For example, via providing seminars with participant fees; charging for food at the school canteen; charging fees for use of school dormitories; providing services in particular fields of study at the school (e.g. car repair or hairdressing); or renting out sports facilities. Also, vocational schools can now be accrediting institutions which can be a source of income. For example, one of the schools visited during the OECD review issued Euro certificates for welders and external companies would refer their employees to the school.

There is an emphasis on school self-evaluation and building professional responsibility and capacity

A recent OECD review found that the vast majority of education systems in the OECD had legal requirements aimed at stimulating a school self-evaluation culture, but that these varied significantly in nature (OECD, 2013b, Table 6.4). A major recommendation from the OECD review was to raise the profile of school self-evaluation. In 2006, Estonia reinforced the role of school self-evaluation, with a requirement for schools to conduct a self-evaluation at least once over a three year period. This corresponds to the typical school development plan cycle and the school should evaluate its progress against this benchmark (see Box 4.1). This was in the context of a policy decision to move away from an established cycle of regular school inspection (external evaluation of the school as a whole) to implementing a quality assurance system, with school's self-evaluation being the main focus, and conducting external evaluations on a different theme each year as set by the Minister of Education and Research (thematic supervisions) (Ministry of Education and Research, 2014a).

Self-evaluation policies aim to engage the school community

Estonian law requires schools to prepare the school development plan in co-operation with the board of trustees, the teacher council, the student council and any external experts (see Box 4.1). Also, the school leader must submit the proposed procedures for school self-evaluation to the board of trustees for comment. In this way, it is envisaged that the school community is actively engaged in the self-evaluation and development planning process. During its visit, the OECD review team learned of schools with well-developed self-evaluation processes involving the community and generating their ideas for school development. One school, having written the development plan collectively with the board of trustees and teacher council, also published the report on the municipal website for a period of two weeks to seek comments from parents and the general public. Teachers also reported that they had received special training in school development planning. Compared internationally, Estonia has a much more established culture of seeking written feedback from students for example on school lessons, teachers or resources (83% of Estonian 15-year-old students were in schools where the school leader reported this happened, compared to 60% on average in the OECD) (OECD, 2013a, Table IV.4.32).

Central support to train school leaders in quality assurance management is available

Estonian school leaders are responsible for the school development planning process and an evaluation of school progress against this. To support the legal requirement of self-evaluation in 2006, schools were obliged to use central advisory services between 2006 and 2009 and this was optional up until 2013 (Ministry of Education and Research, 2014a). There was, therefore, a major emphasis on building capacity at the school level to conduct self-evaluation. The Ministry of Education and Research no longer provides advisory services to schools and the basic approach involves a system of trained quality assurance advisors that schools can use to seek advice on how they conduct their self-evaluation (see Box 4.1). Schools would produce a self-evaluation report (the policy is that this should be done at least once during the typical three-year school development plan cycle) and then choose a trained advisor from an official list published on the Ministry's website (*www.hm.ee/et/sisehindamise-nounikud*). All officially trained quality assurance advisors are school leaders or other members of school leadership teams. There are around 200 advisors and each has received targeted training in quality assurance management. All schools must submit data about their self-evaluation report to the Estonian Education Information System and would include information on whether they used an advisor (Ministry of Education and Research, 2014a).

Schools benefit from good information systems

The use of reliable, comparative data in school self-evaluation supports a heightened objectivity in evaluation results (OECD, 2013b). The Ministry introduced a central information system for schools in 2004 that includes a series of "performance indicators" that can be used in self-evaluation (see Box 4.2). In PISA 2012, 96% of Estonian 15-year-old students were in schools that systematically recorded data on teacher and student attendance and graduation rates, student test results and teacher professional development, compared to 86% on average in the OECD (OECD, 2013a, IV.4.32). As these are publicly available they can also be consulted by parents and used by school owners (Ministry of Education and Research, 2014a).

Box 4.2. **Information and materials to support school self-evaluation in Estonia**

The "Estonian Education Information System" (see *http://ehis.hm.ee*) contains five sub-registers (records of education certificates; teachers and school leaders, including job vacancies; students enrolled; general data on educational institutions; curricula and education licenses). It provides access to all data that schools are legally obliged to report and allows a comparison with other institutions. For example, for general education institutions: support for students with special educational needs; the ratio of students remaining in the same class for the second year to the number of students acquiring basic education; the results of state examinations in basic schools by subject; the proportion of graduates of an upper secondary school among students who started Year 10 in the same graduating class; the proportion of students who do not fulfil the obligation to attend basic school; the number of graduates among the number of school entrants (for Years 9 and 12); the proportion of students continuing education among the total number of basic school graduates; the number of teachers with the required qualifications; the average amount of in-service training of teachers (in hours); the age pattern of teachers; the proportion of teachers who left the school during the academic year among the total number of teachers; the percentage of female teachers among the total number of school teachers; student-to-teacher ratios; average size of classes; the number of students per computer; and the number of teachers per computer.

The "Education Eye" is a visual information system with an interface that allows users to click on a map to find out information about schools, of any educational level and type, in that particular area (see *www.haridussilm.ee*). It provides information about hobby education, teacher positions and salaries, education expenditure, student numbers, teaching staff and also contains some performance indicators.

The Ministry of Education and Research also provides materials to support school self-evaluation activities (see *www.hm.ee/et/tegevused/valishindamine/sisehindamine*).

Sources: Ministry of Education and Research (2014), *The Inspectorate of Education of Estonia*, Ministry of Education and Research, *www.sici-inspectorates.eu/getattachment/182ce6c8-0f9b-4b0e-805c-79c6fcfd8ed1*; and *http://ehis.hm.ee*.

School "boards" to link school processes with the school community are well established

There are legal requirements for all Estonian schools to have "boards" with representatives from the school community and these come in different forms (see Table 4.2). In vocational schools, the "Council" is a major decision-making body that is managed by the school leader and it includes a student representative and a trustee of the employees. Vocational schools also have an "advisory body" comprising at least seven members that connect the school and society. The vocational schools visited during the OECD review each included a representative from the Ministry of Education and Research, as well as 8 to 9 representatives from business and industry. Members are volunteers and the schools actively recruit these with an aim to represent each of the major branches of study offered at the school. In doing so, the school may make appeals to the Chamber of Commerce. One school included a member of the Public Employment Service on the advisory body.

In general education schools, there are two decision-making bodies: one comprises all school academic staff (Teacher Council) and makes decisions to help manage the school and organise teaching and learning; the other comprises a majority of members who are

external to the school (board of trustees) and guides, plans and observes teaching and learning. The board of trustees elects a chair and vice chair and holds a meeting at least once every four months during the school year (Basic Schools and Upper Secondary Schools Act, Article 73, Clause 9). The board of trustees in the schools visited during the OECD review had a broad membership, including parents from different study stages of the school, representatives from supporting organisations that were relevant to the age and characteristics of the students educated at the school and, at the upper secondary level, two student representatives. It would appear that there are open channels for students to contribute to school matters even at the lower secondary level. Compared internationally, Estonian students reportedly play a stronger role in giving feedback to the school on lessons, teachers or resources (83% of 15-year-old Estonian students were in schools that have internal or external evaluations and seek written feedback from students, compared to 59% on average in the OECD) (OECD, 2013a, Table IV.4.33).

Well-organised "boards" can be responsive to school development cycle and parents' needs

The Basic Schools and Upper Secondary Schools Act (Article 73, Clauses 10 and 11) guarantees the rights of students and parents to address the board of trustees directly in the event of any matters of dispute concerning teaching and learning at the school and also states that the school leader reports to the board of trustees. During the OECD review, the schools visited reported that their board of trustees or advisory board met between two to four times a year, but more often if needed. In one school the board of trustees communicated an active role, including listening to feedback from students and parents and making direct proposals to the school owner regarding specific school developments. In another school, the board of trustees had taken a lead role in planning the implementation of the State requirement to implement instruction in the Estonian language and was proud to be the first school in the area to implement this measure. In the vocational schools visited during its visit, the OECD review team saw examples of the advisory body playing a role in the appointment of a new school leader in one school and helping to write the school investment plan in another school. Members of the advisory bodies would help identify companies to provide apprenticeships to students. One school appeared to have a very active advisory body that would also invite the school leader to information seminars for top managers in industry, as well as make direct suggestions to the school owner on fields of studies. Ministry representatives reported that frank and constructive feedback from business and industry representatives on the advisory body was invaluable.

Municipalities provide support to promote the role of "boards"

During the visit, the OECD review team also learned of examples of municipal support to promote the role of school "boards". In Tartu, there was a periodic training offered to members of boards of trustees. In Tallinn, the city's quality assurance scheme included feedback from parents on the role of boards of trustees and there is an annual competition to nominate "the best board of trustees of the year".

School leaders are recognised as a key resource and their professional development is considered crucial

There is clear political recognition of the important role that school leaders play in Estonian schools. The 2014 annual meeting of Ministers of Education in the three Baltic States underscored the importance of school leaders and Ministers decided to focus

on this aspect in their subsequent meeting (Ministry of Education and Research, 2014b). The Estonian Lifelong Learning Strategy is the basis on which the government will make its decisions for educational funding for the years 2014-20 and for the development of programmes that support the achievement of necessary changes. The role of school leaders features prominently, with one of the five strategic goals being to develop competent and motivated teachers and school leaders (see Chapter 1). The lifelong learning strategy assumes that school leadership takes responsibility to: provide the strategic leadership for the institution, create an organisational culture that supports learning and development, and support the professional development of teachers (Ministry of Education and Research et al., 2014). The strategy foresees an updated professional development offer for school leadership to help implement the new approach to learning and to manage student learning and development more generally (Ministry of Education and Research et al., 2014). In addition, specific professional development programmes for established school leaders, newly appointed school leaders and future school leaders are being implemented in 2015 (see Box 4.3). In January 2015, the Ministry of Education and Research, Tallinn University, the University of Tartu, the Estonian Association of Heads of Schools and the Estonian Rotary Centre signed a co-operation agreement for the development of a programme for Estonian school leaders, which will send each year at least five school leaders to globally recognised outstanding schools (Ministry of Education and Research, 2014b). There are also plans to strengthen the evaluation of the performance of school leaders (see Box 4.3).

Compared internationally, Estonian school leaders report having received good levels of formal training for their position (see Figure 4.4). Virtually all Estonian school leaders sampled in TALIS 2013 reported they had followed a school administration or principal training programme or course. This compared to 85% internationally on average. Also, continued professional development appears to be more wide spread among Estonian school leaders. 63% of Estonian school leaders reported having followed formal training in instructional leadership after they had taken up their position at the school, compared to 53% internationally on average (see Figure 4.4). As already noted, the central list of advisors for school self-evaluation comprises school leaders who have received targeted training in quality assurance management.

A good use of school facilities is made outside regular instruction time

The Ministry of Education and Research (2015) presents results of a specific survey on how schools use their facilities. The results revealed a wide use of school buildings for extracurricular activities – and these results are mirrored in school leader reports during the PISA 2012 survey (see Table 4.7). Roughly four in five of the surveyed schools reported they allow the use of their facilities for organising activities that are not directly related to the school, although this was more frequently the case in municipal schools (Ministry of Education and Research, 2015a). During its visit, the OECD review team also noted an established culture of renting out facilities to cultural and sports associations etc. This was also the source of a modest income for these schools. According to the Ministry of Education and Research (2015) survey, schools typically do not charge local residents and non-profit associations for the use of their facilities and any fees charged are typically paid to the school owner.

Box 4.3. **Estonian strategy to further develop school leaders, 2014-20**

Plans to strengthen the evaluation of school leader performance

School leaders should be regularly assessed against the competence requirements for the position. The role of a school leader in creating a school's culture is of crucial significance, because the learning environment depends first and foremost on the school leader – whether they value, motivate and support a learner and their developmental potential, whether they support the development of teachers and other school staff members, and whether the school works well with the community and families. In order for Estonian schools to be led by competent and motivated school leaders, who have the determination and ability to carry out the objectives set out in the strategy, the following steps need to be taken:

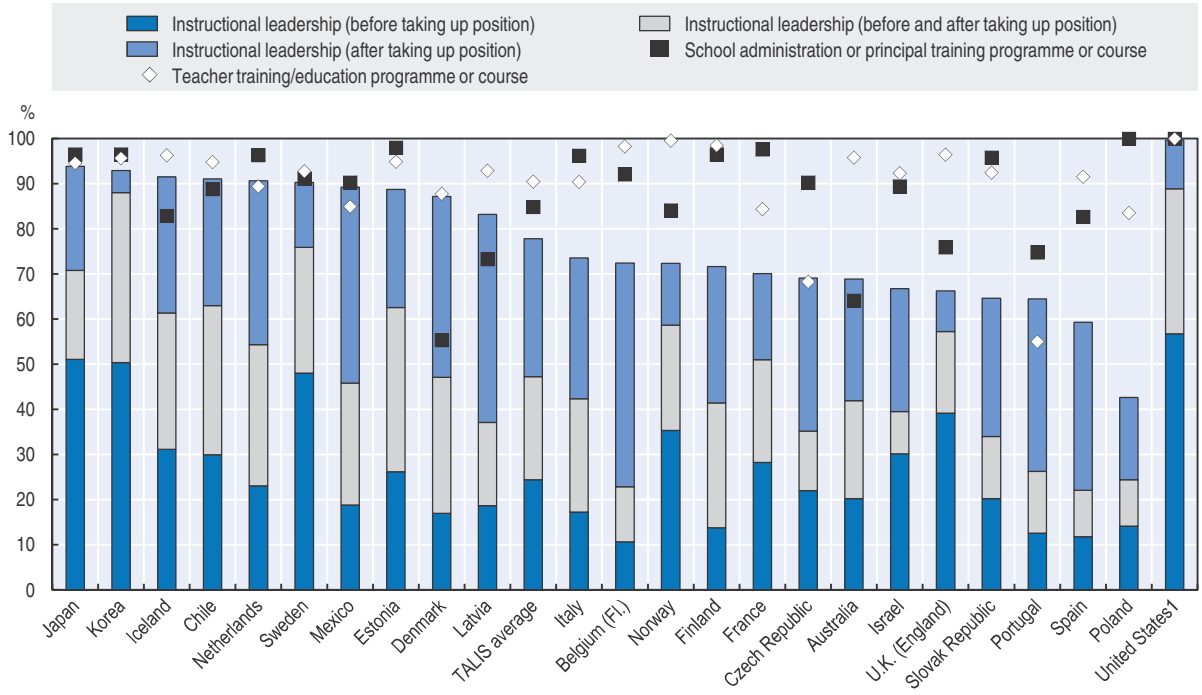
- Associations of School Leaders of pre-primary institutions, general education schools, vocational schools and institutions of professional higher education, and school owners will develop and the Ministry of Education and Research will implement competence requirements for school leaders. This will be the basis for recruiting school leaders, providing feedback on their performance, as well as offering additional training, which among other things also emphasises the objective of implementing the new approach to learning.
- The Ministry of Education and Research will launch a training programme for future school leaders, from which the best candidates will be chosen through open competition (see below).
- The Ministry of Education and Research, in co-operation with school owners, will develop an external appraisal system for school leaders, through which they will get regular professional feedback about their work and how it relates to the school's results, as well as suggestions for additional training. The quality indicators of the institution will be used as the basis in assessing the results of the work of the school leader.

New professional development programmes for school leaders in 2015

- **School team development programme:** 12-month management training programme with the school leader and two other staff members, covering different school management topics. Each module includes tasks which form the basis of a school development project. There is a follow up six months after the end of the programme to observe how the project is being implemented.
- **School Leader Offspring Programme:** 24-month development programme for future school leaders, open to school staff, plus individuals from other sectors. Participants are selected via a competition. Each participant has a mentor and performs field training in schools. The programme offers different modules, including an introduction to pedagogy and the management of learning for those not in the education sector.
- **Programme for new school leaders:** A programme designed to help new school leaders with implementing their responsibilities and to shorten their introduction period. It provides an overview of legislation, financial management, innovation in education, trends, etc. and provides a co-operation network.

Sources: Ministry of Education and Research, the Estonian Co-operation Assembly and the Education Forum (2014), *The Estonian Lifelong Learning Strategy 2020*, *www.hm.ee/sites/default/files/estonian_lifelong_strategy.pdf*; and Ministry of Education and Research (2015), *OECD Review of Policies to Improve the Effectiveness of Resource Use in Schools: Country Background Report for Estonia*, *www.oecd.org/education/schoolresourcesreview.htm*.

Figure 4.4. **School leader reports on formal training, lower secondary education, 2013**



1. The response rate was too low to ensure comparability.
Source: OECD (2014b), *TALIS 2013 Results: An International Perspective on Teaching and Learning*, *http://dx.doi.org/10.1787/9789264196261-en*, Table 3.10.

Challenges

School leader appraisal practices vary and professional feedback is inadequate

The school owner is responsible for both the appointment and dismissal of the school leader. There is no central framework for school leader appraisal and appraisal is not mandatory (OECD, 2013b). The procedures for school leader appraisal are entirely at the discretion of the school owner. Although school self-evaluation is mandatory and this should include an evaluation of management, the procedures for conducting and reporting the results of school self-evaluation are entirely at the discretion of the school. In the case that school owners do conduct regular school leader appraisal, there are likely to be very different criteria in use for the appraisal of school leaders and there is also little guarantee that these would be aligned to school self-evaluation criteria. While the Ministry has developed tools for school self-evaluation, Estonian schools are under no obligation to use these and the OECD review team does not have information on how widely these are used by schools.

During the OECD review, the review team gained the impression that there were open channels of communication between school leaders and school owners to discuss school concerns and/or needs. All schools the review team visited reported regular communication with either the State or municipality about different aspects of school organisation. However, there did not appear to be such a strong culture of professional feedback to the school leader on his/her performance and conduct. School leader representatives reported that professional feedback is generally weak in Estonia. The frequency of professional feedback discussions between the school owner and school leader varied, as well as the nature of these discussions and whether or not these were linked to some form of professional reward or sanction.

Tallinn uses a type of performance-based appraisal system for its school leaders. The official appraisal takes place every two years (representatives from Tallinn's Department of Education commented that the department does not have the capacity to undertake this on an annual basis). Depending on the official appraisal results, school leaders may be eligible for a salary bonus. Representatives from Tartu City reported that there is no official appraisal system in place and therefore the Department of Education's policy is that school leader salaries are equal. However, Tartu City would organise periodic observation in schools, e.g. every two years. Representatives from Narva Department of Education reported that Narva has a set of criteria it uses for the differentiation of school leader salaries. These criteria are agreed by the City Council and include efficiency and quality criteria (e.g. student results in state examinations and Olympiads).

At the same time, there have been attempts to develop criteria for the appraisal of school leaders. The Ministry of Education and Research led a project to establish competency criteria in 2006-07 (Reliability, e.g. setting demanding goals for his/her work, law abiding; Orientation in society, e.g. providing a holistic education, to the economy and the labour market; Learning and educational process management, e.g. setting priorities for school organisation, focus on student development, supporting teacher development; Ensuring a functional organisation, e.g. creating a team, delegating and motivating staff, effectively organising work; self-development). In 2008, the Ministry of Education and Research and Tallinn University also ran a project that developed a set of generic, core and basic competencies (Generic competencies; Core competencies – conceptual thinking, holistic thinking, understanding societal development, pedagogical philosophy; Basic competencies – operations and performance, communication and collaboration, self-management and personal effectiveness, systems thinking, integrity, honesty, trustworthiness). In 2009 a new school leader competency model was developed, but the conclusions of the working group were that this should be used as a basis for school leader self-evaluation, but would not be practicable as an appraisal instrument. The major areas in the competency model are: managing organisational development; learning environment; managing people; managing resources; managing oneself. The major challenge has been implementing this self-evaluation competency model as it is entirely voluntary (Ministry of Education and Research, 2015a). It very much depends on the school owner as to how much this self-evaluation competency model is promoted. For example, the OECD review team learned that Narva municipality had requested school leaders to complete a written self-evaluation and school leaders reported this was a positive development with the municipality taking interest in their work.

There is a need to sustain capacity building for school self-evaluation and quality assurance

The school leader's role as the pedagogical leader could be further strengthened

School self-evaluation is legally defined as a "continuous process, the objective of which is to ensure conditions supporting the development of the student and continuous development of the school" (see Box 4.1). At the same time, schools are legally required to undertake this "at least once" over the period of the school development plan (typically three years) (see Box 4.1). Compared with school leaders in other countries, Estonian lower secondary school leaders were less likely to report that they had engaged in specific activities related to the school development plan over the previous 12 months. In 2013, 58% of Estonian lower secondary school leaders reported they had worked on a

professional development plan for the school over the previous 12 months, compared to 79% internationally (OECD, 2014b, Table 3.3). The use of student performance and evaluation results was reportedly more regular, but still lower than on average internationally (82% of school leaders in Estonia; 89% of school leaders internationally) (OECD, 2014b, Table 3.3). Notably, Estonian school leaders appear to less frequently observe instruction in the classroom compared to counterparts in other OECD countries (see Figures 4.5 and 4.6). This is the major tool for ensuring the quality of teaching and learning and a core part of effective self-evaluation activities (OECD, 2013b).

Engaging the school community in its quality assurance role is not systematic across schools

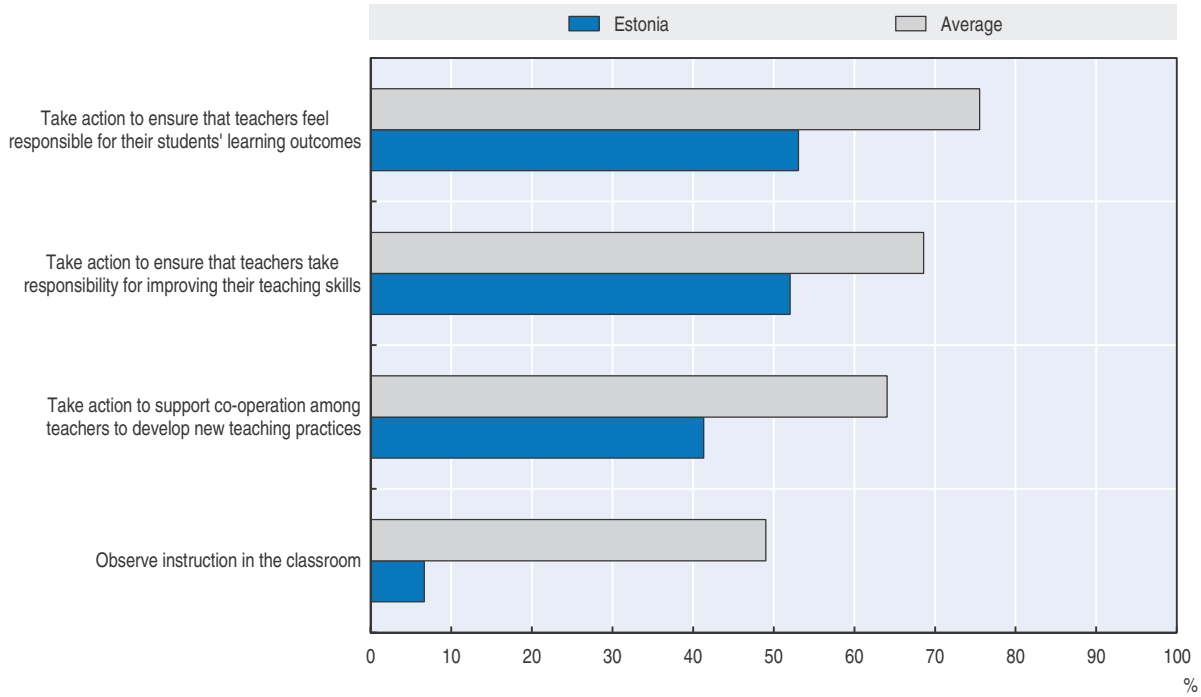
A significant strength in Estonia is the role that is given to school "boards" to influence and actively shape the operation and organisation of schools. However, this very much depends on the capacity of different boards to undertake this role. During the OECD review, the review team noted quite some variation in the approach to school planning and how involved the school community was in this. In the case of instability of school leadership or a lack of strategic vision and oversight, the school community would have an immediate role to play in challenging the school leadership.

School leadership is ageing and there is a need to develop new leaders

International data indicate that the average age of a lower secondary school leader is around 51 years (see Table 4.4). In Estonia, 22% of lower secondary school leaders are aged 60 years or over and this proportion has more than doubled between 2008 and 2013 (see

Figure 4.5. **Reported frequency of pedagogical leadership activities**

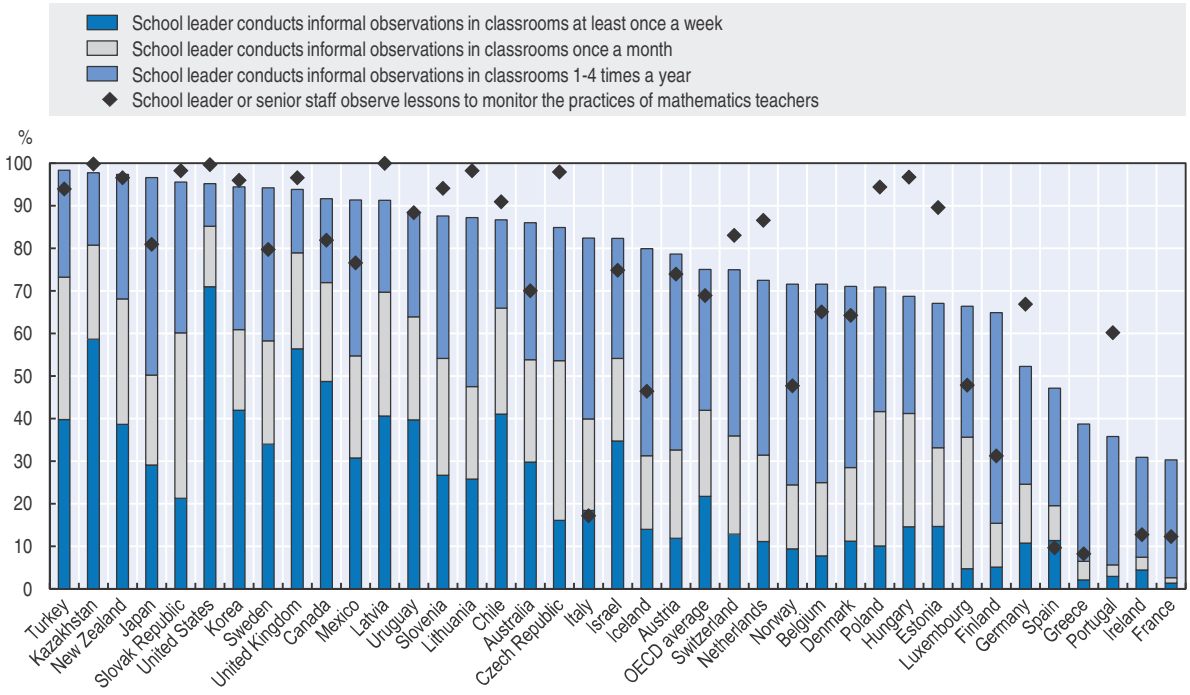
Percentage of lower secondary school principals reporting they had engaged "often" or "very often" in the following (TALIS 2013):



Source: OECD (2014b), *TALIS 2013 Results: An International Perspective on Teaching and Learning*, *http://dx.doi.org/10.1787/9789264196261-en*, Table 3.2.

Figure 4.6. **Reported frequency of classroom observation by school leaders**

Percentage of 15-year-old students whose school leader reported the following (PISA 2012):

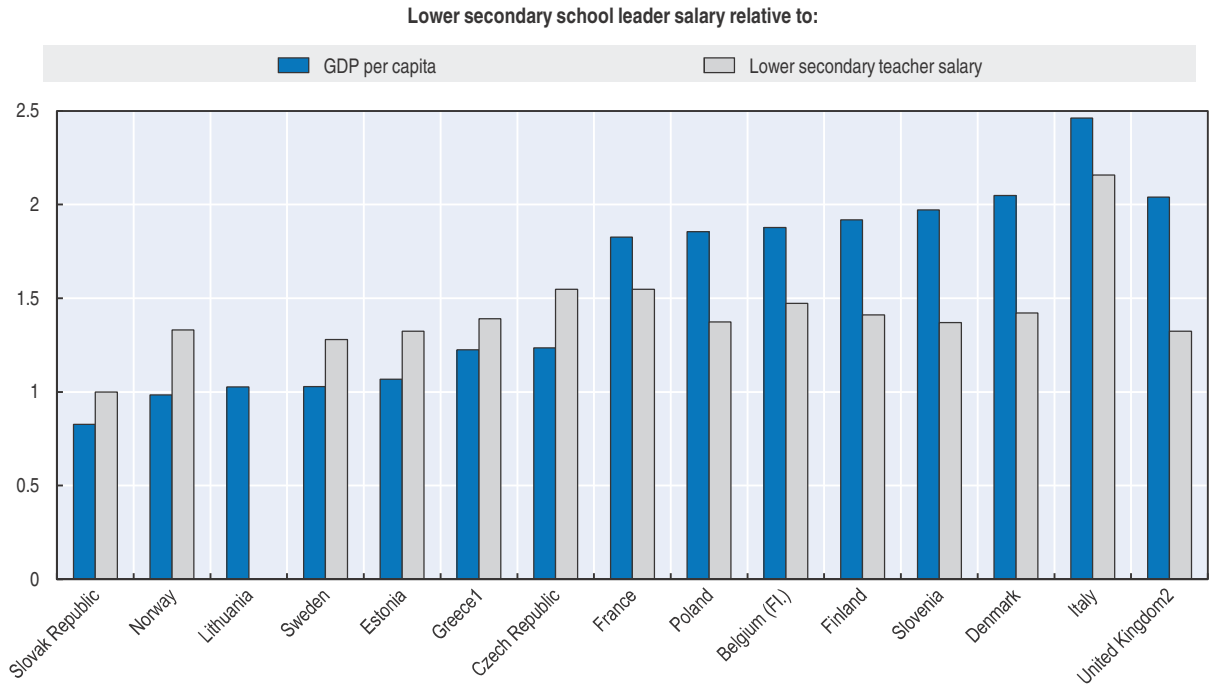


Sources: OECD (2013a), *PISA 2012 Results: What Makes Schools Successful (Volume IV): Resources, Policies and Practices*, *http://dx.doi.org/10.1787/9789264201156-en*, Table IV.4.34; and PISA 2012 Student Compendium, Question ID SC34Q19 (available at *www.pisa.oecd.org*).

Table 4.4). Also, Estonian school leaders appear to have been working longer as school leaders: 12 years, compared with 9 years on average internationally (OECD, 2014b, Table 3.12). These indicators raise a pressing concern to attract new recruits to school leader positions in the future. While the Estonian Lifelong Learning Strategy recognises the need to improve the attractiveness of the school leader career and makes specific reference to more competitive salaries and a work organisation that would be more highly valued by society (Ministry of Education and Research et al., 2014), the OECD review team notes that within the strategy document there are no specific indicators set for school leaders. Rather, under "Competent and motivated teachers and school leadership" there are three indicators to be achieved by 2020 (percentage of teachers aged 30 and under will be 12.5% or more; there is increased competition for study places in teacher education; there will be 25% male teachers in general education) (see Table 1.2).

The OECD review team notes that there is currently not a distinct career structure for Estonian school leaders. In a recent OECD review of evaluation and assessment frameworks, Estonia was one of only four systems without a distinct career structure for school leaders (the other countries were Denmark, the Slovak Republic and Slovenia) (OECD, 2013b, Table 7.A.2). There is no specific framework for school leader salaries in Estonia. Eurydice data on the average actual salaries of school leaders show that Estonian school leaders earn around the same amount as GDP per capita (see Figure 4.7). On this indicator, the school leader career is much more attractive in other European countries.

Figure 4.7. **Indicators of relative attractiveness of school leader salaries, 2013/14**



1. GDP data are for 2012.
2. Excludes Scotland. School leaders of bigger and/or multiple schools earn 2.43 times GDP per capita and 1.57 times the actual salary for lower secondary teachers. Countries are presented in ascending order of school leader salary relative to GDP per capita. Actual average salary data are for 2013/14 and GDP per capita data are for 2013.

Sources: Calculated from data in Eurydice database (*http://eacea.ec.europa.eu/education/eurydice*); and Eurydice (2015), *Teachers' and School Heads' Salaries and Allowances in Europe, 2013/14, Eurydice Facts and Figures*, *http://eacea.ec.europa.eu/education/eurydice/documents/facts_and_figures/salaries.pdf*.

A range of factors constrain human resource management by school leaders

Professional development support to school leaders for new responsibilities is limited

As noted, the need to improve professional development activities for school leaders has been recognised in the Estonian Lifelong Learning Strategy (see Box 4.3). In particular, there is a need to provide professional development opportunities to school leaders to help them meet their new responsibilities in the areas of human resource development. This is ever more pressing, given the broader context that there is lack of political clarity over the responsibility for re-organising the teacher workforce, including bringing new talent into the profession (see Chapters 3 and 5).

Changes to the central funding formula affect the planning of resources by school leaders

During the OECD review, representatives from the National Audit Office (NAO) raised the challenge that regular changes to the central funding allocation mechanism cause problems for school leaders in planning school resources. The NAO hears complaints from municipal and school leader representatives each spring following adjustments to the central allocation formula. Frequent changes in the central funding formula have also promoted the idea that teacher salaries and employment is not an important concern for municipalities (see Chapter 3).

Some schools may have tight budgets and operate within wider political agreements

Although the central funding allocation is calculated on the basis of the minimum teacher salary with an additional 20%, in practice the budget may be tight in some schools. Schools at higher risks of tight budgets are those with smaller student intakes and/or with many senior teachers. During the OECD review, representatives from the Estonian Association of Teachers reported that there is limited room for manoeuvre for school leaders with regard to financial compensation for teachers. Representatives of school leaders appreciated the freedom in being able to set teacher salaries, but noted different constraining factors: a perception that the rules are very strict on how teacher salary and bonus funding could be used; that it is a complicated process to balance the number of teachers and support staff required to ensure quality education within the allocated funding; that there is a need to encourage some staff to retire early.

There are a number of small schools in Estonia. The PISA 2012 sample revealed significantly lower student-teacher ratios in socio-economically more disadvantaged Estonian schools (OECD, 2013a, Table IV.3.9). Data on class sizes (as presented above) indicate that many schools are operating well below the maximum class sizes as specified in national regulations. In fact, the average class size for Years 1 to 6 in municipalities with only one school is lower than the national maximum class size regulation for students with behavioural problems, specific learning difficulties, a sensory impairment or educational problems (see Tables 3.7 and 4.5). This suggests extremely tight budgets for teacher salaries in such schools. Also, representatives from the Estonian Association of Teachers identified the tension that cities and towns have larger classes in order to subsidise smaller classes in rural areas. They raised concerns that there may be a lack of political will to consolidate in the case there are two nearby schools with low enrolment.

School leaders may need to manage teaching workloads within local political agreements, either at the municipal level or within a school via the teacher council. Representatives from Tartu City informed the OECD review team of Tartu's agreement with the local trade unions on a number of teaching hours (23 contact hours). The Trade Union's motivation to establish this agreement was reportedly a concern that school leaders would have too much decision making power on teacher remuneration.

A number of schools face challenges in finding and hiring staff with appropriate qualifications

The Estonian school leader reports on staff shortages are roughly in line with those of their counterparts internationally, however, in the context of overall student/teacher ratios that are internationally very low in Estonia, such perceived shortages are quite striking (see Table 4.7). This is most notable regarding the perception of qualified and/or well performing teachers, which would appear to be dominated by the perception of "performance" (given reports on lack of qualified teachers in particular subjects are in line with international averages). Estonia is one of four OECD systems where reported concerns on teacher shortage are associated with a less positive disciplinary climate at school (OECD, 2013a, Table IV.5.13). During the OECD review, representatives of the Estonian Association of Teachers commented that schools sometimes have to ask retired teachers to stay on due to a lack of qualified teachers coming in. The Ministry of Education and Research (2015) notes that stakeholders comment that vocational education is not sufficiently funded, as a result of which schools are not able to hire professionals to conduct specialised studies. Even at the lower secondary level (i.e. general education), Estonian school leaders reported some shortage of vocational teachers (see Table 4.8).

Table 4.8. **School leader reports on staff shortages in international comparison**

	Estonia (%)	International average (%)
Percentage of lower secondary teachers where this was reported (TALIS 2013)		
Shortage of qualified and/or well performing teachers	50	38
Shortage of teachers with competencies to teach students with special needs	61	48
Shortage of vocational teachers	13	19
Shortage of support personnel	49	47
	Estonia (%)	**OECD average (%)**
Percentage of 15-year-old students where this was reported (PISA 2012)		
Lack of qualified mathematics teachers	17	17
Lack of qualified science teachers	18	17
Lack of qualified language-of-instruction teachers	6	9
Lack of qualified teachers of other subjects	16	21

Sources: OECD (2014b), *TALIS 2013 Results: An International Perspective on Teaching and Learning*, *http://dx.doi.org/10.1787/9789264196261-en*, Table 2.19; and OECD (2013a), *PISA 2012 Results: What Makes Schools Successful (Volume IV): Resources, Policies and Practices*, *http://dx.doi.org/10.1787/9789264201156-en*, Figure IV.3.5.

National policies may also place additional challenges on some schools. National data show quality differences (in terms of educational performance and income level) between graduates from Estonian-instruction and Russian-instruction schools. Reforms aiming to address this seek to improve the Estonian language skills for all students coming out of the school system. During our visit to Narva, the OECD review team learned how this was posing challenges for schools to find and recruit Estonian language teachers.

The engagement of specialist support staff is more difficult in small schools

There are indications that smaller schools may have difficulty to engage specialist support staff. Representatives from local government informed the OECD review team that municipal policy is to provide support staff *in situ* in schools with 500 to 600 students. Teacher union representatives commented that in smaller schools without support staff, there are demands on the school's teachers to be a psychologist, speech therapist, etc. Evaluations by the National Audit Office have revealed that some schools have had problems with paying for support staff. In 2012, reportedly this problem was identified in 25 of the 210 municipalities and in 2013 in 20 municipalities. The central funding allocated for salaries may only be used to pay teachers and school leadership, not support staff. However, there was a regulation for several years that extended the right to use the central funding to pay for support staff. Representatives from the National Audit Office informed the OECD review team that this had caused problems for several municipalities and that it would be conducting an audit to investigate this further. The current approach is to incentivise small schools to buy a variety of support services from the new regional counselling centres (*Rajaleidja* centres).

Policy recommendations

Given the high level of autonomy at the school level in Estonia, the organisation of schooling is largely in the hands of the school community with a key role for the school leader. As such, the OECD review team suggests policy options that address the management and further development of the school leader role and that seek to introduce a greater level of external challenge to ensure school quality improvement.

Develop a strengthened school leader appraisal process

Estonian school leaders enjoy a high level of autonomy and responsibility. Leithwood et al. (2004) argued that given their potential impact on policy implementation, efforts to improve school leader recruitment and career advancement, including appraisal and ongoing professional development, can constitute highly cost-effective measures for making education policies effective and for improving teaching and learning for all students. In fact, several countries recognised the potential high rates of return on investments in improving school leadership during the 2012 International Summit on the Teaching Profession (Asia Society, 2012; Schleicher, 2012). In this context, the OECD review team strongly supports the Estonian policy commitment to strengthen the appraisal of school leader performance (see Box 4.3).

The OECD Review of Evaluation and Assessment Frameworks examined research and practices in OECD countries and recommended different procedures to improve the objectivity of school leader appraisal (see Box 4.4). While there is considerable need for the ability to adapt appraisal procedures to the local context, in the absence of any common procedures or framework, there may be concerns with the accuracy, utility, validity, reliability and fairness of appraisal procedures (OECD, 2013b). The challenge is to develop appraisal processes, frameworks and conditions that do not require an excessive investment of time and effort, that serve as an effective tool for improving practices and that are perceived as useful and relevant by school leaders (OECD, 2013b).

In Estonia, there is a pressing need to develop and ensure implementation of a regular and more coherent approach to school leader appraisal. The use of a central reference on which to base school leader appraisal is highly desirable in increasing the objectivity of appraisal procedures. Earlier efforts to develop professional standards for school leaders in Estonia can provide input for the plans to develop an "authoritative" set of professional standards. The OECD Review of Evaluation and Assessment Frameworks provides recommendations for the development of professional standards, including that school leaders should be actively involved in this task, as is currently envisaged in Estonia. Professional standards should (OECD, 2013b):

- Map out what school leaders are expected to know, be able to do and how: reflecting the complexity of school leaders' tasks and responsibilities; providing a concise statement of the core elements of successful leadership.
- Provide a multilevel career structure: distinguishing between different levels of experience, development needs and leadership positions; guiding the appraisal of all school leadership positions.
- Provide a central reference that can be adapted to local needs: for defining individual objectives and/or the selection of appraisal aspects and criteria; for informing selection and recruitment processes and initial school leadership preparation and induction programmes; for informing ongoing in-service training and professional development opportunities and career advancement.
- Highlight the importance of school leadership for evaluation and assessment: practices related to monitoring, evaluation and appraisal, e.g. supporting and observing teachers, and observing students and classrooms.

Box 4.4. **OECD recommendations on procedures for school leader appraisal**

Promote the appraisal of pedagogical leadership together with scope for local adaptation

A focus on pedagogical leadership is essential to encourage school leaders to take direct responsibility for the quality of learning and teaching in their school. However, a focus on pedagogical leadership in appraisal must:

- **Be manageable and relevant:** local selection of criteria in line with central/state guidance that emphasise the importance of pedagogical leadership; focus on priority areas relevant to a particular school and the leadership required in that context; promote individual as well as school needs, e.g. through the mandatory use of a range of reference standards and documents, such as individual job descriptions and school development plans; recognise that successful school leadership requires choices on time investment and management and administration-oriented tasks may at times be equally important as pedagogical leadership tasks.
- **Recognise the need for and promote professional development:** ensuring access to high-quality, targeted and relevant professional development opportunities to develop pedagogical leadership; embedding appraisal for pedagogical leadership within a comprehensive leadership development framework; providing an opportunity for feedback and identifying areas for school leader's development.

Promote the appraisal of school leaders' competencies for monitoring, evaluation and assessment

School leaders play a key role for the effectiveness of evaluation and assessment frameworks, particularly for teacher appraisal and school evaluation. Therefore, school leader appraisal should address their ability to:

- **Manage internal teacher appraisal processes,** e.g. through evaluating school leaders' competencies to manage staff; to authentically evaluate teaching and learning; to understand, observe and recognise good teaching; and to give developmental feedback to teachers.
- **Lead the school's self-evaluation processes,** e.g. involving the school community in self-evaluation processes, ensuring their school's collaboration during external evaluations, and communicating external evaluation results to their school community.

It should also lead to opportunities to improve these competencies. For example, with professional development in how to observe classrooms and interview teachers; how to analyse data; how to use school evaluation results; how to develop school improvement plans; how to involve teachers, students and parents in school self-evaluation.

Promote the use of multiple instruments and sources of evidence

Research has increasingly stressed the benefits of using multiple tools to form a fair, valid and reliable picture of a school leader's performance from a comprehensive perspective. Limited research has provided some insights into the benefits of different tools and the caution needed when using others:

- The use of school leader portfolios, if embedded within wider support structures, may ensure a school leader's views are adequately represented in the appraisal process and help strengthen the formative dimension of appraisal.
- The use of stakeholder surveys requires an awareness among evaluators of the politics that appraisal may involve. Teachers' views may add most value to an appraisal process considering their close insights into a school's daily routine.
- Given the wide range of factors that influence student outcomes within and outside schools, and persistent evidence that the impact of school leaders on student learning is mainly indirect and mediated through others, holding school leaders directly accountable for improved student test scores or the value-added by the teachers in their school faces serious challenges and risks.

Source: OECD (2013b), *Synergies for Better Learning: An International Perspective on Evaluation and Assessment*, *http://dx.doi.org/10.1787/9789264190658-en*.

The mapping out of current responsibilities is an important part of developing professional standards. The OECD review team notes that the professional standards should devote sufficient attention to competencies in resource management, given that Estonian school leaders are responsible for the effective organisation of schooling, including school budget and staff management. In particular, the OECD review team underlines the need to adequately reflect school leader responsibilities for staff appraisal and school self-evaluation. International data indicate that there is room for Estonian school leaders to step more authoritatively into this role, particularly with regard to classroom observation. Effective school leaders are those who can make evidence-informed decisions, provide the instructional leadership that teachers need to help all their students succeed in school, and create a collaborative school environment in which teachers take part in school decisions (Schleicher, 2015).

Sustain and strengthen policies to attract and develop new school leaders

Estonia shares the challenge that other OECD systems face to attract new talent to prepare for and eventually take up school leader positions. But international data suggest that the ageing of the school leadership in Estonia is particularly acute (see Table 4.4). The OECD project on *Improving School Leadership* by Pont et al. (2008) highlighted several barriers to attracting new school leaders, including heavy workload, lack of adequate support and remuneration and uncertain career advancement prospects.

Create a distinct career structure and national framework for school leader salaries

Estonia does not have a distinct career structure for school leaders. There are no possibilities for advancement to different positions with different levels of responsibility. This is a challenge in many OECD systems and very few have established opportunities for school leaders' career advancement (OECD, 2013b, Table 7.A.2). As the OECD project on *Improving School Leadership* suggested, career development prospects as well as salary scales for school leaders that are separate from teachers' salary scales and that reflect leadership structures and school-level factors may help attract high performing leaders to all schools (Pont et al., 2008). Importantly, the OECD recommends that the suggested development of an authoritative set of professional standards underpin a multilevel career structure for school leadership. OECD systems as diverse as Australia, Canada, France, Israel, Korea, Mexico and Norway offer school leaders a multilevel career (OECD, 2013b, Table 7.A.2).

Continue to support professional development programmes to attract and develop new school leaders

The OECD review team commends the development of the School team development programme and the School Leader Offspring Programme (see Box 4.3). While these are newly offered in 2015, they hold promise to develop and attract new talent into school leadership positions. In particular, the competitive and selective nature of the School Leader Offspring Programme supports an approach to attract the highest quality candidates. It will be important to evaluate these new programmes and where necessary to adapt them, but the approach to engage and develop new talent should be supported as a priority.

Strengthen the degree of external challenge to further improve school self-evaluation practices

A considerable strength in the Estonian approach is the sustained focus on the importance of school self-evaluation. This supports the further development of professionalism and responsibility at the school level and, with effective procedures in place and an actively engaged school community, underpins a continual evaluation of the effectiveness of the organisation of schooling.

However, the OECD Review of Evaluation and Assessment Frameworks underlined the importance of ensuring an adequate degree of external scrutiny to challenge the findings of school self-evaluation (OECD, 2013b). In the current approach, there are two main elements that ensure a degree of externality in school self-evaluation. First, Estonian schools have ready access to comparable data that can support a more objective self-evaluation. Schools must also report data on their self-evaluation, which is a way to hold schools accountable for their self-evaluation procedures. Although, the National Audit Office had raised some concerns over the reliability of some school reporting and this would obviously lessen the usefulness of such data for school self-evaluation (National Audit Office, 2013). Nevertheless, comparable data allows schools to benchmark their own data and to set specific goals for improvement in their school development plans. Second, Estonian schools can engage the services of an external advisor to technically support their self-evaluation procedures. Although, a school may engage an advisor simply to advise on procedures and not to help with analysing and challenging the results of self-evaluation. Therefore, neither of these elements guarantees that there will be an external challenge to the results of school self-evaluation.

In the context of a research study in systems with external whole-school evaluation, two external factors were found to promote improvement in school self-evaluation practices: a clear communication of what is a "good school", that is, clear criteria for school evaluation, and the fact that evaluation results are shared with key stakeholders, such as school boards, parents and students, as they are sensitive to the results and this leads to pressure for improvement (Ehren et al., 2013). In the Estonian context, there could be stronger emphasis on the publication and use of results from self-evaluation. Many OECD systems have introduced reporting requirements for schools (OECD, 2013b). In particular, part of the self-evaluation pays attention to school management. This is an area where there could be clearer procedures and requirements for either the board of trustees or the advisory body to publicly comment on the results of school self-evaluation and to underline areas for future development. The OECD review revealed some interesting examples of support to build capacity of school "boards" to perform their responsibilities. It would be valuable at a system level to identify and share examples of effective "boards" and to promote their role in school quality improvement.

The OECD review team recommends that careful consideration is given to extending the external school evaluation approach to conduct whole-school evaluations where data indicate there may be particular quality concerns. There are important central resources to help inform the quality throughout the Estonian school system. Alongside central student assessments, the approach to conduct external evaluations on particular topics allows the collection of evidence on current school practices. This information, coupled with information reported by schools in the Estonian Education Information System, forms an important information base to judge an overview of quality throughout the Estonian school system. In schools where risks have been identified, there could be a thorough

examination of the school self-evaluation results and procedures and targeted support from advisors where necessary. The OECD Review of Evaluation and Assessment Frameworks revealed varied capacity for school self-evaluation at the school level within all education systems reviewed. In recognition of this, many systems with external whole-school evaluation adapt their evaluation cycles or intensity of evaluation according to the school's capacity to conduct rigorous self-evaluation. Those schools where self-evaluation procedures are less robust are subject to a more frequent or more intense external school evaluation. Another possibility is to externally validate school self-evaluation processes through an audit system led, for instance, by inspection services (see also Chapter 2).

Consider building up support services to schools with senior, experienced teachers

The OECD review team notes challenges that some schools face in hiring and/or paying for specialist support staff. At the same time, in the context of low student/teacher ratios in Estonia in comparison to other countries, reported concerns on finding and hiring staff with appropriate qualifications are striking. There may be room to build up school support services using senior and experienced teachers. This should be seen in the broader context of overall funding for education (see Chapter 3).

Notes

1. For example in the PISA 2012 mathematics assessment, total variance of student performance in Estonia was 77% of that across OECD countries and of this only 13% was between schools (compared to 37% on average in the OECD) (OECD, 2013a, Table IV.1.12a).
2. 943 management staff in 556 schools (including 42 special schools and 16 adult high schools).
3. TALIS is the OECD Teaching and Learning International Survey, which was implemented in 2008 and in 2013, covering lower secondary education and with the participation of 24 and 34 countries respectively. TALIS 2013 enabled countries to also conduct the survey in their primary and upper secondary schools. Estonia participated in both editions of TALIS with a sample of teachers restricted to lower secondary education. The results derived from TALIS are based on self-reports from teachers and school principals and therefore represent their opinions, perceptions, beliefs and their accounts of their activities. Further information is available at *www.oecd.org/edu/school/talis.htm*.
4. Lower secondary education (ISCED 2) comprises Years 7 to 9 in the Estonian school system and thus can be offered in basic schools, *gymnasiums* with classes for basic school and full cycle schools. Note that special education schools are not included in the OECD TALIS sample.

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Chapter 5

The teaching workforce in Estonia

This chapter is about policies to improve the effectiveness of the teaching workforce. It deals with the size of the teaching workforce and its geographical distribution. Furthermore, it discusses teacher preparation, recruitment, career development and use of time. The chapter places particular emphasis on areas of priority for Estonia such as the low status of the teaching profession, teacher compensation, teacher professional development and the career structure. The chapter also reviews the management of the teaching workforce, teacher appraisal processes and the use of teaching assistants.

The statistical data for Israel are supplied by and under the responsibility of the relevant Israeli authorities. The use of such data by the OECD is without prejudice to the status of the Golan Heights, East Jerusalem and Israeli settlements in the West Bank under the terms of international law.

This chapter addresses policies to improve the effectiveness of the teaching workforce. Among other things, it analyses the size of the teaching workforce and its geographical distribution; how teachers are prepared and improve their skills while in the profession (e.g. initial preparation, professional development); how teachers are recruited and distributed across individual schools; how teacher resources and teaching time are allocated to students so that they optimally respond to improvement priorities (e.g. class size, teacher-student ratios, use of teachers' time); and how teachers are incentivised to perform at a high level (e.g. teacher evaluation, teacher certification, recognition and compensation).

Context and features

Profile of the teaching workforce

Size of the teaching workforce and its main characteristics

In 2013/14, 7 869 teachers worked in pre-primary education for an equivalent of 7 500 full-time positions. In 2008/09, the respective numbers were 7 486 and 7 175, reflecting a growth of 5.1% in the number of teachers and 4.5% in the number of full-time equivalent positions during this period. In general education, in 2013/14, the number of teachers was 14 226 for a full-time equivalent of 11 739 positions. In 2008/09, the respective numbers were 14 682 and 12 452, reflecting a decrease of 3.1% in the number of teachers and of 5.7% in the number of full-time equivalent positions during this period. In vocational education, in 2013/14, the number of teachers was 2 129 for a full-time equivalent of 1 427 positions. In 2008/09, the respective numbers were 2 096 and 1 824, reflecting an increase of 1.6% in the number of teachers and a decrease of 21.8% in the number of full-time equivalent positions. In general education, in 2013/14, 42.4% of teachers worked a full workload, 18.2% less than a half workload, 27.0% between a half workload and less than a full workload, and 12.4% more than one full workload (Ministry of Education and Research, 2015).

A major feature of the teaching profession in Estonia is its high degree of feminisation: the proportion of females in 2012 reached 100% in pre-primary education (against an OECD average of 97%), 92% in primary education (OECD average of 82%), 81% in lower secondary education (67% within the OECD), 78% in general upper secondary education (OECD average of 59%) and 64% in vocational upper secondary education (OECD average of 53%). In lower secondary education, Estonia had the highest proportion of female teachers among OECD countries, while in upper secondary education it had the 2nd highest such proportion (OECD, 2014a).

The teaching profession in Estonia is considerably aged when compared to the OECD average. In 2012, the proportion of teachers aged less than 30 was 9%, 8% and 8% in primary, lower secondary, and upper secondary education respectively, against OECD averages of 13%, 11% and 9%. The proportion of teachers aged 50 and over was 37%, 48%

and 50% in primary, lower secondary, and upper secondary education respectively, the 5th, 3rd and 3rd highest such proportions among OECD countries (against OECD averages of 30%, 34% and 38%) (OECD, 2014a).

Class size and student-teacher ratio

In 2012, class size was relatively low in Estonia at 17 (2nd lowest figure in OECD area) and 16 (lowest figure among OECD countries) for primary and general lower secondary education respectively (the OECD average was 21 and 24 for the same educational levels, OECD, 2014a). This masks considerable variation across sectors, as the respective averages for the private sector were 15 (2nd lowest figure) and 12 (lowest figure) (OECD, 2014a).

Student-teacher ratios in Estonia are also below the OECD average (except for upper secondary education). In 2012, the average student-teacher ratio was 7, 13, 10 and 14 in pre-primary, primary, lower secondary and upper secondary education respectively, which compare to the following OECD country averages: 14, 15, 14 and 14. According to data provided by the Ministry of Education and Research, the student-teacher ratio in pre-primary education increased from 8.9 in 2005/06 to 9.2 in 2013/14; decreased in general education from 13.2 in 2005/06 to 12.0 in 2013/14; and increased in vocational education from 15.1 in 2005/06 to 18.0 in 2013/14, which is mostly explained by the reorganisation of the vocational education schools network (see Chapter 1).

Qualifications of teachers

In international comparison, Estonian teachers have average educational attainment. According to TALIS data, in 2013, 88.5% of Estonian lower secondary teachers had a university degree (ISCED 5A) or higher, the 9th lowest figure among the 34 TALIS participating countries (against a TALIS average of 89.5%). Also, by 2013, 94.4% of Estonian lower secondary teachers had completed a teacher education programme, the 12th highest figure among the 34 TALIS participation countries (against a TALIS average of 89.8%) (OECD, 2014b).

Initial preparation

In Estonia, an individual can acquire qualifications for teaching in three distinct ways:

- Completing an initial teacher education programme at either the bachelor's or master's degree level.
- Completing a pedagogy master's level programme after obtaining a bachelor's degree in another field.
- Through the professional qualifications system, by having teacher professional competencies validated by a teacher professional body, involving specific assessments (being currently introduced, see below under "career structure").

At the pre-primary education level, a teaching qualification requires the completion of a bachelor's degree with a typical duration of three years. In 2013, all new teachers had qualifications at this level while only about 62% of the totality of teachers had qualifications at this level (OECD, 2014a). In general education, both at the basic and upper secondary levels, a teaching qualification requires the completion of a master's degree with a typical duration of five years. However, teachers of elective subjects are only required to have a higher education degree (either at bachelor's or master's level). In 2013, about 93% of the totality of teachers in general education had qualifications at master's level (OECD, 2014a). While for primary education, initial teacher education is mostly concurrent (subject

knowledge acquired at the same time as pedagogical competencies), for lower and upper secondary education, initial teacher education is generally consecutive (pedagogical competencies acquired after subject knowledge). In vocational education, at the upper secondary level, a teaching qualification requires the completion of a bachelor's degree with a typical duration of three years. In 2013, all new teachers had qualifications at this level while about 77% of the totality of teachers had qualifications at this level (OECD, 2014a). A pre-condition to teach in a vocational school is to have graduated from an upper secondary school or to have work experience of the specific field taught. In order to support students to acquire practical skills in vocational education, the school director can hire experts from the labour market with only a secondary vocational education qualification but teachers with such qualifications can only constitute up to 20% of the whole teaching body of the school (Ministry of Education and Research, 2015).

An initial teacher education degree certifies teachers as fit to enter the profession. There are no other requirements to enter the profession. Access to initial teacher education programmes follows the general rules to access higher education. Students access initial teacher education following completion of secondary education and there is generally no specific selection process except possibly for an interview and the requirement of a minimum grade point average (OECD, 2014a). In all initial teacher education programmes, teacher practicum involves a minimum of 50 days spent at a school acquiring some teaching experience. In 2013, there was a curricular reform in initial teacher education.

In order to attract young talented people to initial teacher education, the Estonian government established a teacher education scholarship to support the acquisition of teaching qualifications to promising candidates. The amount of the scholarship is EUR 160 per month.

Recruitment into teaching

The main requirement to apply for a job as a teacher is to hold a teaching degree for the relevant level of education and field of study. Teachers are hired into schools through an open recruitment procedure organised at the school level and led by the school director. Schools have autonomy in teacher appointment, deployment and dismissal. However, schools need to follow regulations regarding teacher required standard qualifications and procedures for job placement. Teachers apply directly to schools and the hiring procedure typically involves interviews at the school with a panel organised at the school level.

Career structure

In Estonia, teachers do not have civil servant status and are employees of the state, the municipality or the private entity managing the private school. In Estonia, the majority of teachers have tenure (indefinite length of position) but there are also teachers on fixed-term contracts, mainly as substitutes for teachers who are absent for a long time. According to TALIS data, in 2013, 84.5% of lower secondary teachers had tenure (against a TALIS average of 82.5%), 6.0% had a fixed-term contract for more than one school year and 9.5% had a fixed-term contract for one school year or less (OECD, 2014b).

The teaching profession in Estonia has typically been differentiated vertically through a multi-step career structure. This was originally implemented through an attestation career system which is being progressively replaced by a new competency-based career structure.

Until the end of 2013, the career structure of teachers was based on an *attestation* system. The *attestation* system was based on four career stages: i) junior teacher; ii) teacher; iii) senior teacher; and iv) methodologist teacher. While the "junior teacher" and "teacher" stages were awarded indefinitely, the "senior teacher" and "methodologist teacher" stages were awarded for five years. As an example, in order to access the rank of "senior teacher", the teacher needed, as eligibility criteria, to accumulate 160 hours of professional development courses and contribute to education events/conferences in the previous five years. The attestation procedure then entailed a self-evaluation, an internal evaluation with an attestation committee formed at the school level and an external evaluation with an attestation committee formed by the Ministry of Education and Research. While this system no longer exists in general education, it is still available for pre-primary education teachers. The objective is to also discontinue teacher attestation in pre-primary education in a few years.

As of 2013, a new system of teacher professional qualifications has been introduced in association with a new career structure. Unique features of the career structure are that it has no formal links to salary levels and access to its higher levels is voluntary. Its main aim is to serve as a reference for teachers' competency development. There are four career grades, which reflect different levels of professional competencies and experience:

- ***Teacher (level 6):*** applies only to pre-primary teachers upon entrance in the teaching profession, following the completion of an initial teacher education programme (at bachelor's degree level) or following the recognition of professional qualifications for this level by the teacher professional body. This career stage is awarded indefinitely.
- ***Teacher (level 7.1):*** is awarded upon entrance in the teaching profession, following the completion of an initial teacher education programme (at master's degree level) or following the recognition of professional qualifications for this level by the teacher professional body. This career stage is awarded indefinitely.
- ***Senior teacher (level 7.2):*** is awarded to a teacher who, in addition to conducting teaching activities, supports the development of the school and of other teachers and is involved in methodological work at the school level. This career stage is awarded for five years, period after which the teacher needs to submit a new application.
- ***Master teacher (level 8):*** is awarded to a teacher who, in addition to conducting teaching activities, participates in development and creative activities in and outside his or her school and closely co-operates with a higher education institution. This career stage is awarded for five years, period after which the teacher needs to submit a new application.

The career structure is associated with a set of teacher professional standards, which define the competencies associated with each career stage. The development of the teacher professional standards is the responsibility of the Estonian Qualifications Authority while the certification processes to reach the different career stages are the responsibility of a teacher professional organisation (the Estonian Association of Teachers). Teachers can apply for certification at any of the levels twice a year (April and November). The certification procedure involves two stages: i) an evaluation of a set of documents submitted by the candidate; and ii) an interview. The certification procedure is undertaken by a three-member committee (see below).

A separate career structure, based on a distinct set of professional standards, exists for teachers in vocational education who teach vocational subjects. There are three career grades, which reflect different levels of professional competencies and experience:

- ***Vocational teacher (level 5):*** at this level, teaching involves mainly practical work methods to develop students' practical skills and work habits.
- ***Vocational teacher (level 6):*** at this level, the teacher conveys theoretical knowledge and teaches practical working skills. In co-operation with companies and professional associations, the teacher develops professional training at school.
- ***Vocational teacher (level 7):*** at this level, in addition to the tasks expected at the previous career stage, the teacher contributes to the development of the vocation/profession he or she teaches outside the school. At this level, the teacher supervises and mentors other colleagues and contributes to improve the reputation of vocational education.

Upon entrance into teaching, a 12-month induction programme is mandatory. The induction programme provides for a mentor to supervise the work of the beginning teacher. The mentor, who is a teacher at the receiving school, is appointed by the school director and has at least three years of experience in pedagogical work and passed a specific training in supervision. The mentor is also required to provide feedback to the initial teacher education institution from which the beginning teacher received his or her qualification. During the induction year, the beginning teacher prepares an individual development chart which contains a self-evaluation of his or her experience.

In Estonia, there is also room for teachers to diversify their roles in schools. A teacher can become the head of a subject section, co-ordinate a subject in the school, or be invited by the school director to management roles such as deputy-director. Other possible roles include mentor of a beginning teacher, curriculum development, class teacher (taking co-ordination and communication responsibilities for one specific class), co-ordination of professional development at the school, preparation of study materials, etc.

Compensation

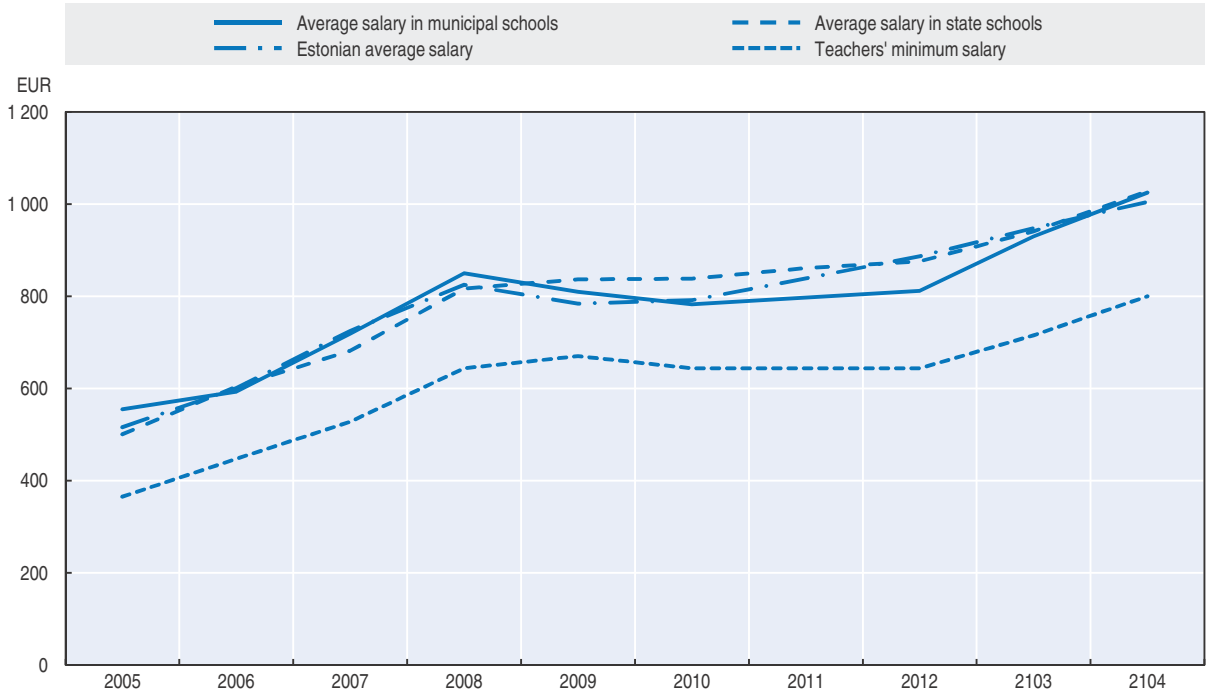
There are no teacher salary scales defined at the national level. Only the minimum teacher salary is established by the national government following collective negotiations between the government and teacher unions. The minimum teacher salary also applies to private schools. Actual compensation of individual teachers is defined at the school level by the school director. In some municipalities, there are also collective agreements with teacher unions which school directors then need to respect. This approach to teacher compensation gives considerable room for variation of teacher salaries across subsystems (state, municipal, private) and across municipalities. Table 5.1 illustrates differences of average teacher salaries across municipal and state schools. It also shows efforts by the

Table 5.1. **Monthly teacher salaries, in EUR, 2005-14**

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Average teacher salary in municipal schools	555	593	719	850	810	783	797	812	930	1 025
Average teacher salary in state schools	501	604	682	817	837	838	861	876	941	1 028
Estonian average salary	516	601	725	825	784	792	839	887	948	1 005
Teachers' minimum salary	365	447	528	644	670	644	644	644	715	800

Source: Ministry of Education and Research (2015), *OECD Review of Policies to Improve the Effectiveness of Resource Use in Schools: Country Background Report for Estonia*, *www.oecd.org/education/schoolresourcesreview.htm*.

Figure 5.1. **Monthly teacher salaries, 2005-14**



Source: Ministry of Education and Research (2015), *OECD Review of Policies to Improve the Effectiveness of Resource Use in Schools: Country Background Report for Estonia*, *www.oecd.org/education/schoolresourcesreview.htm*.

government to increase teachers' minimum salary and the fact that average teacher salaries are now around the level of the Estonian average salary (see Figure 5.1). The increase in teachers' salaries in the last few years in Estonia has been the most significant among the OECD countries for which data are available (see Figure 5.1).

In addition, teachers may also receive special allowances for a number of reasons, upon the decision of the school director. Compensation defined at the school level typically takes into account the years of teaching experience, extra qualifications, professional development activities, management responsibilities in addition to teaching, extra working hours, special tasks such as career guidance, teaching students with special educational needs and outstanding performance (OECD, 2014a).

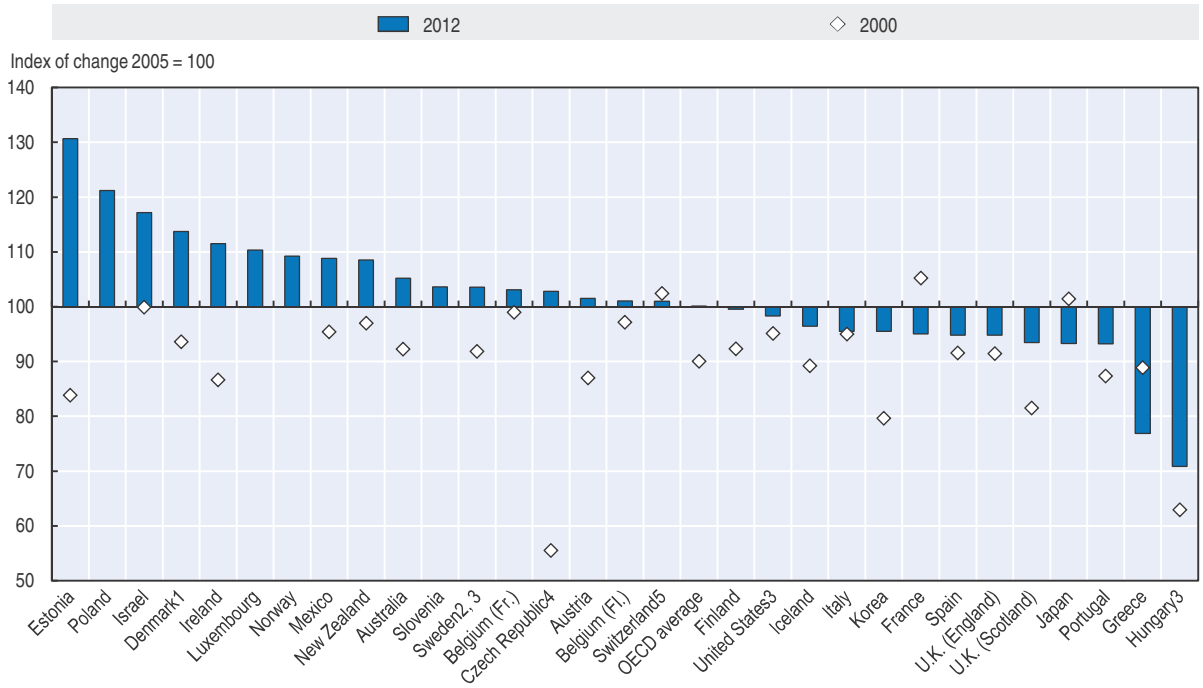
Furthermore, there are some incentives from the national government to work outside large cities. The Beginners Allowance is targeted at qualified teachers who are appointed to a school for the first time within 18 months of completing initial teacher education on the condition that the school is located outside Tallinn or Tartu. In 2014, the one-off allowance was of EUR 12 783, paid in three instalments, and required the teacher to stay at the school for five years.

Workload and use of teachers' time

In Estonia, as of the 2013/14 school year, teacher employment is conceived on the basis of a workload system, i.e. regulations, as stated in the Working Time of Educational Staff Act, stipulate the total number of working hours and define the range of tasks teachers are expected to perform beyond teaching itself. Previously, teachers were employed under a teaching load system, whereby only teaching contact hours were defined. The total annual

Figure 5.2. **Change in lower secondary teachers' salaries, 2000, 2005 and 2012**

Index of change between 2000 and 2012 (2005 = 100, constant prices), for teachers with 15 years of experience and minimum training



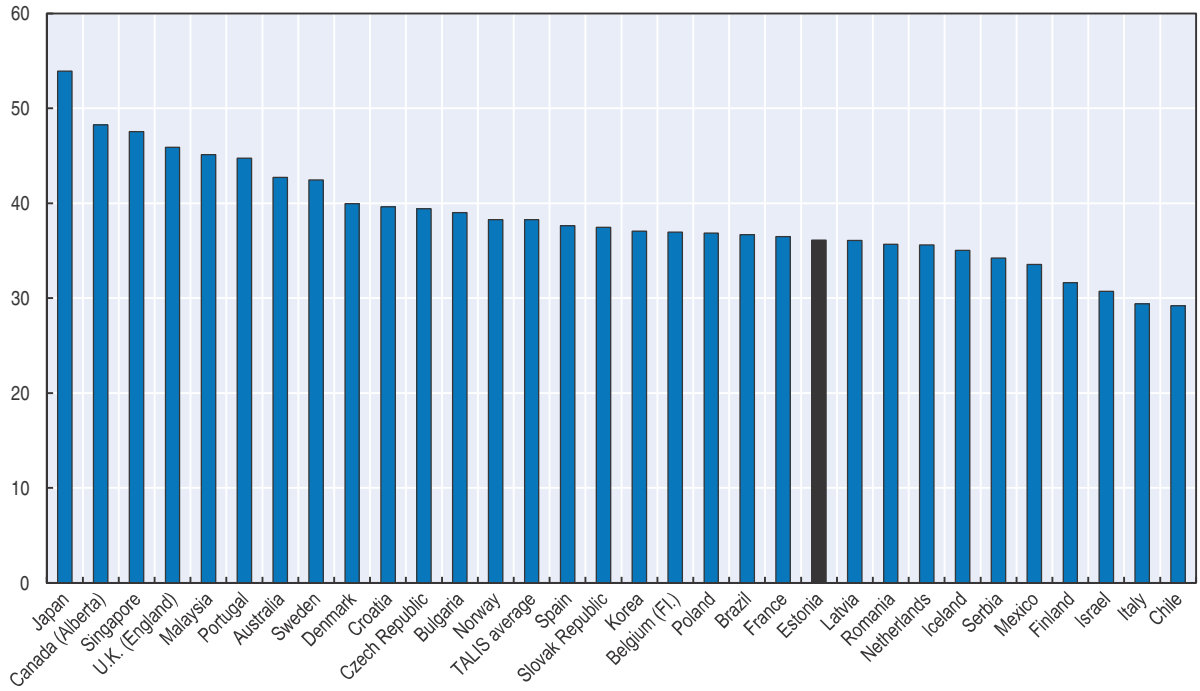
Notes: Countries are ranked in descending order of the index of change between 2005 and 2012 in the salaries of lower secondary teachers with 15 years of experience.

1. Break in time series following methodological changes in 2009.
2. Year of reference 2011 instead of 2012.
3. Actual base salaries.
4. Break in time series following methodological changes in 2012.
5. Salaries after 11 years of experience.

Source: OECD (2014a), *Education at a Glance 2014: OECD Indicators*, *http://dx.doi.org/10.1787/eag-2014-en*.

number of statutory working hours is 1 540 for all education levels (except for pre-primary education), slightly below the OECD averages of 1 649 (primary education), 1 649 (lower secondary education) and 1 643 (general upper secondary education) (OECD, 2014a). In pre-primary education the number of statutory working hours is 1 610, below the OECD average of 1 654 (OECD, 2014a). In Estonia, the number of statutory working hours also corresponds to the number of working hours that need to be performed at the school. Figure 5.3 reflects self-reports of lower secondary teachers regarding actual hours worked during a week, positioning Estonian teachers below the TALIS average. Up until recently, teaching time was also regulated, with the maximum being set at 1 320 annual hours in pre-primary education (well above the OECD average of 1 001 hours), 619 hours in primary education (below the OECD average of 782 hours), 619 hours in lower secondary education (below the OECD average of 694 hours) and 568 hours in general upper secondary education (below the OECD average of 655 hours) (OECD, 2014a). However, as of the start of the 2013/14 school year, there are no regulations concerning teaching hours, only the maximum workload for a full-time teacher is defined.

Figure 5.3. **Number of hours teachers report having worked during the most recent complete calendar week, lower secondary education, 2013**



Notes: A "complete" calendar week is one that was not shortened by breaks, public holidays, sick leave, etc. Also includes hours worked during weekends, evenings or other off-classroom hours. The sum of hours spent on different tasks (shown in Figure 5.4) may not be equal to the number of total working hours because teachers were asked about these elements separately. It is also important to note that data presented represent the averages from all the teachers surveyed, including part-time teachers.
Source: OECD (2014b), *TALIS 2013 Results: An International Perspective on Teaching and Learning*, *http://dx.doi.org/10.1787/9789264196261-en*.

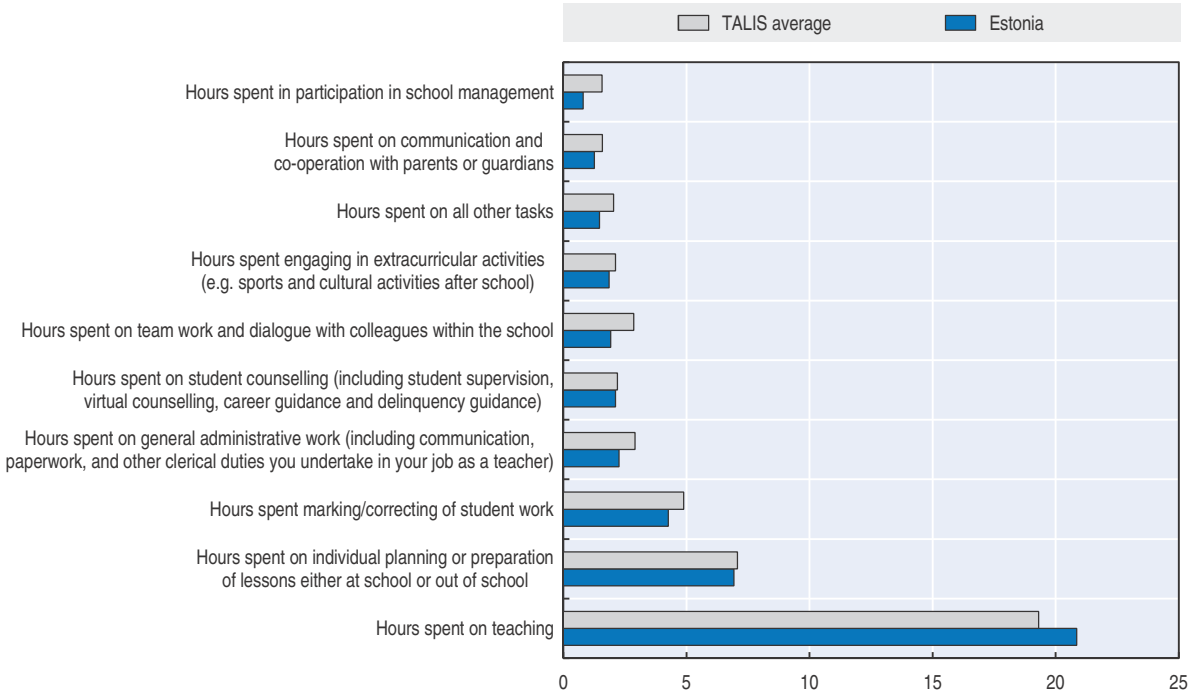
As of 2013, regulations stipulate that, for all educational levels, in addition to teaching, the following tasks were expected to be undertaken at the school by teachers while not specifying the associated required time (OECD, 2014a):

- individual planning or preparing lessons
- teamwork and dialogue with colleagues
- marking student work (except in pre-primary education)
- supervising students during breaks (except in pre-primary education)
- providing counselling and guidance to students (except in pre-primary education)
- participating in school management
- general administrative communication and paperwork
- communicating and co-operating with parents or guardians
- engaging in extracurricular activities after school
- engaging in professional development activities.

The distribution of tasks for single teachers across the stipulated workload depends on school-level arrangements and decisions by the school management. All that is regulated is total working hours (35 hours a week). In addition to the tasks listed above, teachers can also develop subjects' syllabi, prepare students for competitions such as Olympiads and give substitution classes.

Figure 5.4 shows the average number of hours lower secondary teachers report having spent on a variety of tasks for both Estonia and the average among TALIS countries. It highlights the fact that Estonian teachers spent relatively more time than teachers in other countries on the core aspects of a teacher's work such as teaching itself and preparing lessons while they spend relatively less time in other tasks such as participation in school management, communication with parents or extracurricular activities (OECD, 2014b).

Figure 5.4. **Number of hours teachers report having spent on the following activities during the most recent complete calendar week, lower secondary education, 2013**



Notes: A "complete" calendar week is one that was not shortened by breaks, public holidays, sick leave, etc. Also includes tasks that took place during weekends, evenings or other off-classroom hours. The sum of hours spent on different tasks may not be equal to the number of total working hours (shown in Figure 5.3) because teachers were asked about these elements separately. It is also important to note that data presented represent the averages from all the teachers surveyed, including part-time teachers.
Source: OECD (2014b), *TALIS 2013 Results: An International Perspective on Teaching and Learning*, *http://dx.doi.org/10.1787/9789264196261-en*.

Teacher appraisal

Teacher appraisal for in-service teachers in Estonia occurs in two specific contexts: as regular appraisal for performance management in schools and, on a voluntary basis, as part of certification processes to reach the higher levels of the professional career structure.

Regular appraisal for performance management

School directors typically appraise their pedagogical staff on a regular basis. The school director is responsible for regular internal appraisal, but may delegate this authority to lower positions in the school, such as the deputy school director. Other individuals, including the chairs of subject sections and methodology associations, may also participate in the process, depending on the size and organisational structure of the school. Schools have a high degree of autonomy regarding the way they implement regular teacher appraisal for performance management. School directors are expected to determine the aims, criteria and methods of appraisal, while accounting for the school's

specific context, educational programme and priorities. The appraisal generally involves classroom observation. School directors may write an evaluation report regarding the performance of each teacher and store it within the teacher's file.

The primary aim of the internal teacher appraisal process is formative, i.e. the appraisal should provide feedback on the teacher's performance and inform teachers' competency development. At the same time, appraisal results may also influence teachers' salary levels as these are defined at the school level by the school director. However, school directors appear to have little room for manoeuvre in awarding such bonus payments due to resource constraints at the school level. Sanctions are only applied in rare cases. If teachers underperform on the internal appraisal, school directors are more likely to provide recommendations for improvement measures and give time to the teacher to develop and show improvement. In cases of serious underperformance or violation of legal regulations, it is possible for the school leader to dismiss teachers.

External appraisal for certification

The voluntary teacher certification process, organised by the Estonian Association of Teachers, involves an evaluation based on two instruments: i) a portfolio prepared by the teacher which includes a self-evaluation, examples of own work, lesson plans and might also include appraisals by the school director; and ii) a 30-minute interview with the 3-member appraisal committee, who also analyses the portfolio. Classroom observation is not required but either the candidate or the appraisal committee can request it. Appraisal committees are formed from a pool of about 30 experienced teachers organised by the Estonian Association of Teachers. The certification process may also involve some feedback to the candidates which they can use for their own professional development.

Teacher professional development

The mandatory requirement for teachers to undertake professional development (160 hours every five years), which was established in 2000, is currently being discontinued. The objective is to move to a system whereby teachers have the incentive to undertake professional development to gain the competencies needed to access the higher stages of the teaching career and perform new roles at schools.

While teachers ultimately choose the professional development activities they undertake, school directors guide this choice and validate those professional development activities which are partially or fully publicly funded. The school owner (state, municipality, private) may also advise taking specific professional development activities. The teacher establishes a professional development plan which, in part, takes into account the school development plan.

Co-ordination of professional development provision has been, to some extent, recentralised recently. While in the past school owners (municipalities and private providers) used to receive the equivalent to 3% of the "salary budget" (see Chapter 3) as earmarked funds for professional development of teachers and school leaders, this proportion was changed to 1% of such budget, which they prioritised in light of their school development plan. The other 2% remained available for teacher professional development but became centrally managed by institutions such as the Innove Foundation in the context of large development projects for teachers. These are often supported by EU structural funds such as the ESF co-financed programme "Raising the qualification of teachers in general education from 2008 to 2014", managed by Innove. In the context of

these projects, Innove accredits service providers which design professional development activities which fit the objectives of the programme. Another example is the EDUKO programme, another ESF co-funded project, which seeks to improve the education of sciences through the development of science teachers in both teacher education institutions and schools. Meanwhile, since 2015, earmarked funds for professional development activities of teachers and school leaders are no longer linked to the "salary budget". Instead these are determined on the basis of a per student model (EUR 12 per student per year).

However, there is no central public agency to co-ordinate teacher professional development in the country. Professional development is provided by a range of different institutions including higher education institutions, teacher education institutions, individual schools, teachers' professional organisations, municipalities and private companies. Information about available programmes is typically provided by municipalities and school management (OECD, 2014a). Schools and teachers select professional development in the free professional development market using their own budgets for professional development and have access to the variety of programmes free of charge proposed centrally as part of the centrally-managed budget for professional development (as described above).

Other school staff

In addition to teachers and school leaders, other types of school staff are hired. These include support specialists, administrative staff (e.g. secretaries, accountants) and maintenance staff (e.g. cooks, repairmen). The owners of schools recruit support staff on the basis of the financial capacities and needs of the schools.

As support specialists, schools typically employ special education teachers, school psychologists, speech therapists and social pedagogues. Support specialists have specific higher education qualifications in their field (e.g. a special education teacher has higher education in special education). A special education teacher guides the development of a child with educational special needs (either at a special school or at a mainstream school). A school psychologist is involved in the individual counselling of students as a result of learning difficulties or behavioural problems. A speech therapist works with children who have difficulties in communicating. A social pedagogue develops the social abilities of students with learning difficulties and at risk of social exclusion. The number of support specialists is provided in Table 5.2.

Table 5.2. **Number of support specialists, 2013/14**

Type of support specialist	Pre-primary schools	General education schools	Vocational schools
Special education teacher	86	153	10
School psychologist	-	169	7
Speech therapist	343	279	-
Social pedagogue	-	227	10
Total support specialists	**429**	**828**	**27**
Number of schools	652	540	40

Source: Ministry of Education and Research (2015), *OECD Review of Policies to Improve the Effectiveness of Resource Use in Schools: Country Background Report for Estonia*, *www.oecd.org/education/schoolresourcesreview.htm*.

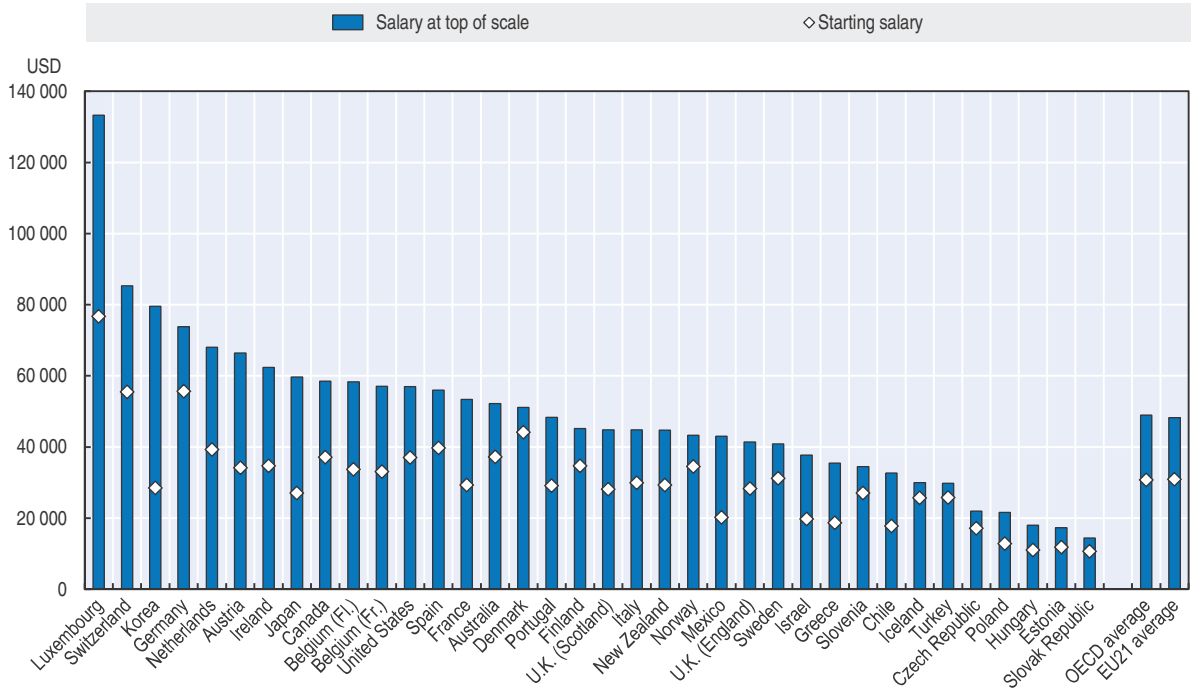
Strengths

Efforts made to increase teacher salaries send important signals about the importance of teaching

In recent years, there have been considerable efforts on the part of the Estonian government to increase teacher salaries. Salaries increased, in real terms, by 30% between 2005 and 2012 (for lower secondary teachers with 15 years of experience, see Figure 5.2), the highest such increase in OECD countries for this period. In 2013 and 2014 there were also increases of teachers' minimum salary by 11% and 11.8% respectively, in nominal terms (see Table 5.1).This reflects a commitment to bring teacher salaries to more adequate levels. There is a clear awareness that the salaries of Estonian teachers remain among the lowest within the OECD area, both at the start of the career and at the top of the scale (see Figure 5.5). Salaries of Estonian teachers are also low when compared to those of tertiary-educated workers in Estonia in the context of the OECD area (see Figure 5.6): they reach 61% and 84% in pre-primary and lower secondary education respectively, of the average salary of tertiary-educated workers against OECD averages of 80% and 88% (OECD, 2014a).

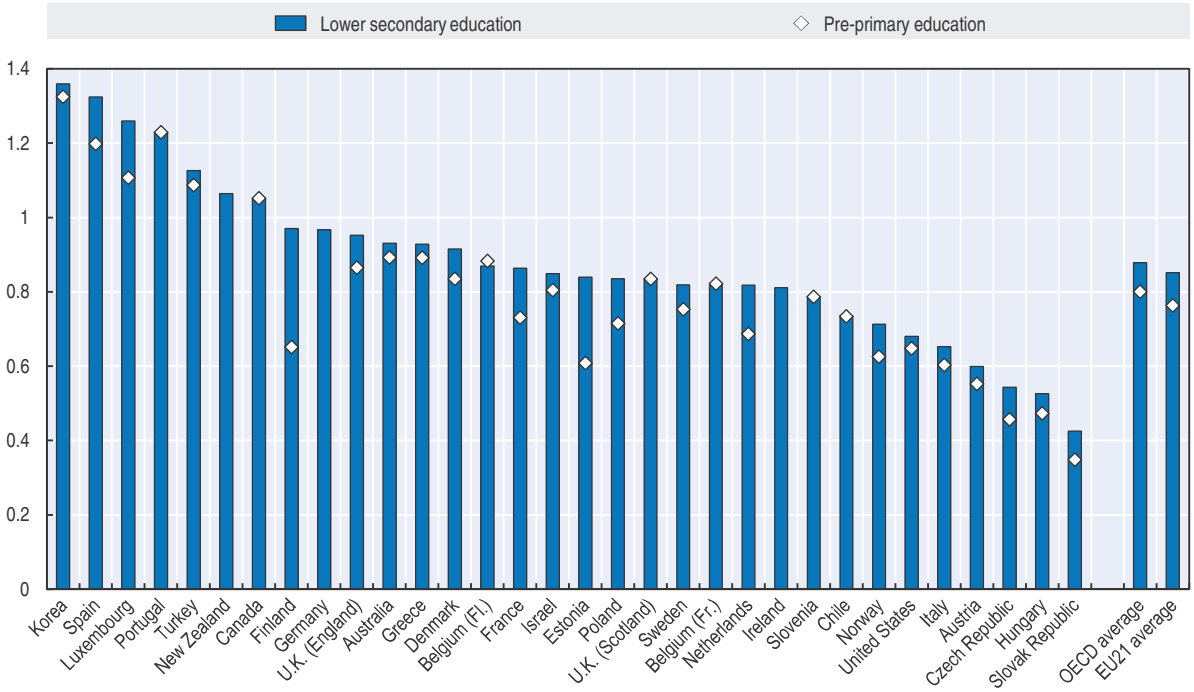
While there is no general shortage of teachers in the Estonian school system, low salaries have detrimental effects on the motivation levels of teachers (see below) and considerably limit the ability of the system to attract high-quality entrants and more males into the profession (OECD, 2005). Hence, it is important that the Estonian government is

Figure 5.5. **Teacher annual salaries at start of career and at top of the scale, lower secondary education, public institutions, 2012**



Notes: Salaries are in equivalent USD converted using PPPs (purchasing power parity) for private consumption. Data refer to statutory salaries for teachers with minimum qualifications. For Hungary, Sweden and the United States, data refer to actual salaries. For Sweden, reference year is 2011. EU21 average refers to the average for the 21 European Union member states which are also members of the OECD.
Source: OECD (2014a), *Education at a Glance 2014: OECD Indicators*, *http://dx.doi.org/10.1787/eag-2014-en*.

Figure 5.6. **Teachers' salaries relative to earnings for tertiary-educated workers aged 25-64, public institutions, pre-primary and lower secondary education, 2012**



Notes: Data refer to actual salaries except for the following countries, for which statutory salaries were used: Austria, Canada, Ireland, Korea, Portugal, the Slovak Republic, Slovenia, Spain and Turkey. The "Actual" method refers to the ratio of average actual salary, including bonuses and allowances, for teachers aged 25-64 to earnings for full-time, full-year workers with tertiary education aged 25-64. The "Statutory" method refers to the ratio of teachers' statutory salary after 15 years of experience and minimum training (regardless of age) to earnings for full-time, full-year workers with tertiary education aged 25-64. For Belgium (French Community), Belgium (Flemish Community), England and Scotland, data on earnings for full-time, full-year workers with tertiary education refer to Belgium and the United Kingdom respectively. Scotland includes all teachers, irrespective of their age. For Sweden, average actual teachers' salaries do not include bonuses and allowances. EU21 average refers to the average for the 21 European Union member states which are also members of the OECD.

Source: OECD (2014a), *Education at a Glance 2014: OECD Indicators*, *http://dx.doi.org/10.1787/eag-2014-en*.

committed to improve teachers' salary conditions. Given the tight budget constraints, the approach has consisted of increasing teacher salaries as efficiency gains are achieved in the school system.

Teaching standards have been developed

As part of the overall development of the qualifications framework, in the context of an ESF co-financed programme, the Estonian Qualifications Authority has developed professional standards for teachers, both for general education and vocational education. The professional standards are differentiated for the different career stages in both general education (teacher-level 6; teacher-level 7.1; senior teacher-level 7.2; and master teacher-level 8) and vocational education (vocational teacher levels 5 to 7). For general education, the standards cover the following aspects: i) planning and preparation; ii) the learning environment; iii) instruction and supporting learning; iv) reflection and professional development; v) student counselling and communication with parents; vi) methodological work and mentoring at school level (for levels 7.2 and 8); and vii) methodological work and project management at the level of the profession (for level 8). The standards describe key competencies for each of these dimensions and for each stage of the teacher career. The

intention is that the standards guide teachers' professional development and career advancement through their link to the internal and certification appraisal processes of teachers.

The establishment of teaching standards that provide a clear and concise profile of what teachers are expected to know and be able to do is a very positive development. Teaching standards are essential mechanisms for clarifying expectations of what systems of teacher education and professional development should aim to achieve, offering the credible reference for making judgements about teacher competence, guiding teacher professional development, and providing the basis for career advancement. Clear, well-structured and widely supported teaching standards are a powerful mechanism for aligning the various elements involved in developing teachers' knowledge and skills (OECD, 2005).

There is considerable autonomy for the management of the teaching workforce at the local level

In Estonia, there is considerable autonomy for the management of the teaching workforce at the school level (see also Chapter 4). According to TALIS 2013 data, 100%, 99.7%, 95.4% and 83.8% of lower secondary Estonian teachers worked in schools where principals reported that they had considerable responsibility for appointing/hiring teachers, dismissing/suspending teachers from employment, establishing teachers' starting salaries and determining teachers' salary increases respectively, compared to TALIS averages of 74.7%, 68.4%, 35.9% and 37.1% respectively (OECD, 2014b). Similarly, according to PISA 2012 data, 84% of 15 year-olds attended schools whose principals reported that only principals and/or teachers had a considerable responsibility for selecting teachers for hire, against an OECD average of 49% (OECD, 2013a, Figure IV.4.2). The equivalent figure for responsibility for dismissing teachers was 90%, against an OECD average of 36% (OECD, 2013a, Figure IV.4.2). However, according to the PISA data, only 11% and 14% of 15 year-olds attended schools whose principals reported that only principals and/or teachers have a considerable responsibility for establishing teachers' starting salaries and determining teachers' salary increases respectively, against OECD averages of 11% and 12% (OECD, 2013a, Figure IV.4.2). This is explained by the fact that while school principals have an important influence in setting salaries, they need to follow regulations, in particular the minimum teacher salary established at the national level.

This autonomy of local management of the teaching workforce is a strength in a system where schools are individually judged on their ability to improve student learning. In teacher recruitment, a direct interaction with the applicants takes place, typically through interviews, and allows the use of a more complete set of criteria to match individual applicants' characteristics to schools' specific needs. The process of open recruitment also offers advantages to applicants since they can more directly choose the school and identify with the school's educational project. As a result, the process is more likely to build a sense of commitment of teachers to the schools where they are recruited. Wößmann (2003) used data from the Trends in International Mathematics and Science Study (TIMSS) to examine the relationship between different aspects of centralised and school-level decision-making and student performance. He concluded that students in schools with autonomy in deciding on the hiring of teachers performed statistically significantly better in mathematics and science, as did students in schools that could determine teacher salaries themselves.

However, it is important to note that school autonomy in teacher recruitment involves some complexity as there is the potential for an inequitable distribution of teachers (as schools with more resources and located in advantaged areas have greater potential to attract high quality teachers, see below) and opportunities for favouritism in teacher selection by schools. The latter requires transparency in recruitment processes through making information about existing teaching openings publicly available.

In addition to recruitment, school leaders have considerable room to develop the competencies of their teaching bodies through internal teacher appraisal. However, they seem not to be doing it to a great extent. According to TALIS 2013 data, only 58% of school directors of lower secondary schools reported having worked on a professional development plan for the school in the 12 months prior to the survey, the fifth lowest figure among TALIS countries against an average of 79.1% (OECD, 2014b). Also, the autonomy from which schools benefit to allocate their budgets to teacher resources (deciding on the number of teachers and the distribution of tasks across individual teachers) grants them with the ability to select the optimal number and mix of school staff for their schools.

Teachers resources seem to be equitably distributed across schools and school locations

As explained above, recruitment at the school level combined with differences in resources across schools has the risk of leading to an inequitable distribution of teachers across schools. In Estonia, there are indications from TALIS and PISA data that there is no inequitable distribution of teachers across schools and school locations. For instance, according to TALIS 2013 data, the proportion of lower secondary teachers with five years of experience or less working in schools located in areas with 15 000 people or fewer was 10.9%, only slightly above the equivalent proportions in schools located in areas with 15 001 to 100 000 people (10.0%) and in schools located in areas with more than 100 000 people (10.2%). Similarly, the proportion of teachers with a highest level of education of ISCED 5A or above was 86.3%, 91.8% and 93.1% for the same types of areas (from smaller to larger) (OECD, 2014b).

The proportion of teachers with five years teaching experience or less is also similar across: levels of school disadvantage (14.4% working in schools with more than 30% of socio-economically disadvantaged students; 10.1% working in schools with 30% or less of socio-economically disadvantaged students); proportion of students with special needs (12.7% working in schools with more than 10% of students with special needs; 9.7% working in schools with 10% or less of students with special needs); and proportion of students with different first language (10.8% working in schools with more than 10% of students whose first language is different from the language of instruction; 10.6% working in schools with 10% or less of students whose first language is different from the language of instruction) (OECD, 2014b). The proportion of teachers with a highest level of education of ISCED 5A or above across schools with these same characteristics are also similar (OECD, 2014b).

In addition, in schools attended by 15 year-olds, according to PISA data, student-teacher ratios tend to be more favourable in smaller locations and socio-economically disadvantaged areas while the intensity of professional development among teachers is similar across the size of the areas in which schools are located and across levels of school social disadvantage (Tables IV.3.9 and IV.3.13, OECD, 2013a).

Teacher employment under a workload system improves efficiency in the teacher labour market

Estonia has recently made a positive move towards conceiving teacher employment on the basis of a workload system, whereby compensation is associated with a teacher's working load. This is likely to improve efficiency in the teacher labour market. This is in contrast with countries which conceive teacher employment on the basis of a teaching load only. Employment under a workload system recognises that teachers need time for engaging in a range of other tasks, including the adequate preparation of lessons. This is likely to make the profession more attractive, by recognising the variety of tasks a teacher performs, and to reduce the number of teachers seeking a high teaching load if pay was directly associated with the number of teaching hours. At the same time, this allows teachers to engage in activities other than teaching, in light of school priorities, including through the requirement to stay at the school outside teaching hours (and within working hours) as is the case in Estonia. This also fosters teacher engagement at the school and provides greater opportunities for collaboration among teachers.

As explained in OECD (2005), teachers are now expected to have much broader roles. Some examples of areas of broadened teacher responsibility are: initiating and managing learning processes; responding effectively to the learning needs of individual learners; integrating formative and summative assessment; teaching in multicultural classrooms; introducing new cross-curricular emphases; integrating students with special needs; working and planning in teams; evaluation and systematic improvement planning; ICT use in teaching and administration; projects between schools; management and shared leadership; providing professional advice to parents; and building community partnerships for learning (OECD, 2005). These broaden responsibilities necessitate a conception of teacher employment which recognises the whole range of activities of a teacher in addition to teaching.

A new competency-based career structure has been introduced

A career structure based on the acquisition of competencies both for general education teachers (four levels) and for vocational education teachers (three levels) has been introduced. This is a positive move to get away from the previous complex and resource intensive system of teacher attestation. The new certification model has a range of advantages. First, teacher certification to reach the different career stages is a competency-based process, i.e. it directly assesses whether a teacher has acquired the competencies needed to perform at the different stages of the career, using as a reference teacher professional standards. Instead, teacher attestation processes focussed on the acquisition of qualifications with no professional standards as a reference. Second, the new teacher certification model has better links to teaching practice, in particular through the analysis of the teacher portfolio and, in some cases, through classroom observation. Previously, the teacher attestation model was too resource intensive and resembled an academic exercise not concentrated on the core work of teachers. Third, the new certification system is owned by the profession through the leadership of the Estonian Association of Teachers, which is the awarding body.

In the new model, teachers, as they access higher stages of the career structure, are expected to have deeper levels of knowledge, demonstrate more sophisticated and effective teaching, take on responsibility for curricular and assessment aspects of the school, assist colleagues and so on. Given the potential greater variety of roles in schools as

the teacher goes up the career ladder, the career structure has the potential to generate greater career diversification. Such opportunities for diversification already exist in Estonian schools as with management responsibilities, developers of professional development activities, or mentors of beginning teachers. These roles, which do not necessarily involve differentiated pay but instead release time from classroom teaching, provide more opportunities and recognition for teachers and meet school needs (OECD, 2005). Another strength of the new certification model is the requirement for re-certification at the highest certification levels. As a result, the teacher needs to periodically demonstrate being fit to perform at the higher certification stages, providing incentives to update his or her knowledge and skills continuously.

Another positive feature of the organisation of the teacher career in Estonia is that beginning teachers are supposed to benefit from a 12-month mentoring programme which provides them with support and additional training as they enter the profession. Beginning teachers should be assigned a more experienced colleague as a mentor. However, TALIS data seem to indicate that this practice is not yet widely spread across Estonian schools. In TALIS 2013, 58.6% of Estonian lower secondary teachers were in schools where the principal reported that no formal induction programme was available for new teachers, compared to the international average of 34.2%; and 88% reportedly were in schools with informal induction activities, compared to 77% internationally (OECD, 2014b). There is ample evidence suggesting that there are benefits beginning teachers gain from mentoring while mentors also derive substantial benefits from the mentoring experience (OECD, 2005).

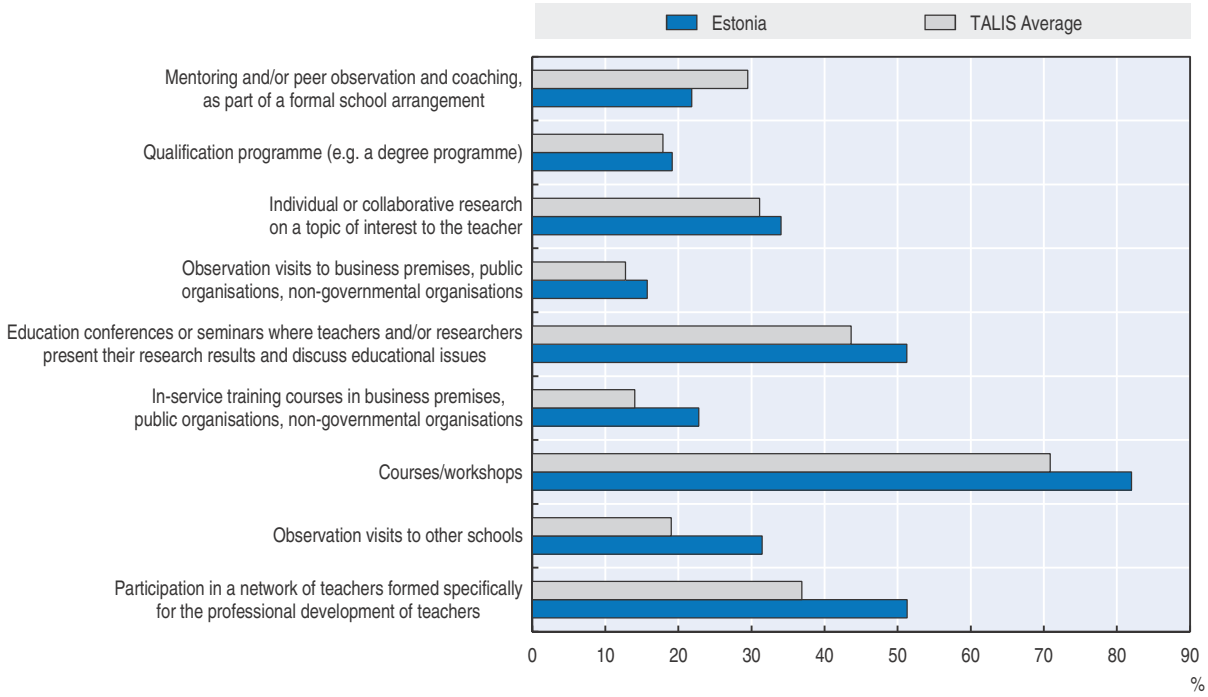
Professional development is demand-led and associated with the acquisition of teacher competencies

In international comparison, the participation rates of Estonian teachers in professional development are high. According to TALIS 2013 data, 93.0% of Estonian lower secondary teachers reported having participated in at least one professional development activity in the previous 12 months, the 10th highest figure among TALIS participating countries, against a TALIS average of 88.4% (OECD, 2014b). Compared to teachers in other systems, Estonian lower secondary teachers in 2013 reported the highest levels of participation in activities such as courses or workshops, participation in a network of teachers formed for professional development and education conferences and seminars (see Figure 5.7).

Hence, professional development is well established among Estonian teachers and benefits from a wide supply of programmes offered by a variety of providers. Schools have dedicated budgets for professional development and the market for the provision of professional development seems to be responding to schools' demands.

Another positive feature of the approach to teacher professional development in Estonia is that it is understood as a mechanism to update, develop and broaden teachers' competencies in agreement with his or her professional aspirations, needs and specific school context. With the development of the new career structure, professional development is conceived as a means to acquire the new competencies necessary for professional growth and career advancement. This approach leads teachers to engage in professional development through the adequate incentives rather than making it mandatory or linking it directly to a salary allowance.

Figure 5.7. **Type of professional development recently undertaken by lower secondary teachers, Estonia and TALIS average, 2013**



Notes: Participation rates for each type of professional development reported to be undertaken by lower secondary education teachers in the 12 months prior to the survey.
Source: OECD (2014b), *TALIS 2013 Results: An International Perspective on Teaching and Learning*, *http://dx.doi.org/10.1787/9789264196261-en*.

Teacher evaluation internal to the school seems to be established

Another positive aspect of the teaching career in Estonia is the internal teacher appraisal which typically takes place in schools. Results from TALIS show that, in 2013, 98.3% of lower secondary Estonian school directors reported that appraisal was used in the school where the teacher worked, against a TALIS average of 92.6%. Internal teacher appraisal helps teachers learn about, reflect on, and improve their practice in the specific school context in which they teach. It also grants them the opportunity to identify areas for improvement. In the course of its visit, the OECD review team formed the impression that the principle that teachers are appraised is moderately valued and accepted among teachers. According to TALIS 2013 data, 55.7% of Estonian lower secondary teachers reported a "moderate" or "large" positive change in their motivation following teacher appraisal, somewhat below the TALIS average of 64.7%.

A key strength of teacher appraisal in Estonia is that the process includes evaluating actual teaching practices in the classroom. Results from TALIS show that, in 2013, 98.6% of lower secondary teachers worked in schools where school directors reported that direct observation of classroom teaching was used as a method of teacher appraisal, compared to an international average of 94.9% (OECD, 2014b). While school directors vary in their approaches to teacher appraisal, it appears that they typically operate an approach whereby they observe the classroom practice of most of their teachers with a certain periodicity (or delegate such task to other levels of management). The process is strongly school-based and school-level professionals have ownership of methods and criteria.

Challenges

The status of the teaching profession is low

Many of the stakeholders interviewed by the OECD review team commented on the low status of the teaching profession. There is an overall feeling among Estonian teachers that society does not value their work. According to TALIS 2013 data, only 13.7% of lower secondary Estonian teachers reported that they agree or strongly agree that the teaching profession is valued in society, the 10th lowest figure among 34 TALIS participating countries (the TALIS average being 30.9%). Similarly, only 69.3% of lower secondary teachers in Estonia reported that they agree or strongly agree that the advantages of being a teacher clearly outweigh the disadvantages, the 9th lowest figure among TALIS countries (against a TALIS average of 77.4%). A significant proportion of them (37.0%) also wonder whether it would have been better to choose another profession, the ninth such proportion against a TALIS average of 31.6%. Nonetheless, 90.0% of Estonian lower secondary teachers also reported that they are satisfied with their job, against a TALIS average of 91.2% (OECD, 2014b). The status of pre-primary education teachers is of particular concern as their salaries are considerably lower than those at other educational levels.

Clearly, there are concerns about the image and status of teaching in Estonia, and teachers often feel that their work is undervalued. This is related to the low relative salaries of teachers (see above) which, to a great extent, determine the teaching profession's social standing. As a result, the teaching profession is not competitive in the labour market, causing difficulties in attracting young people and males to the teaching profession and in keeping motivated those already on the job (see OECD, 2005, for evidence on the impact of salaries on the supply of teachers).

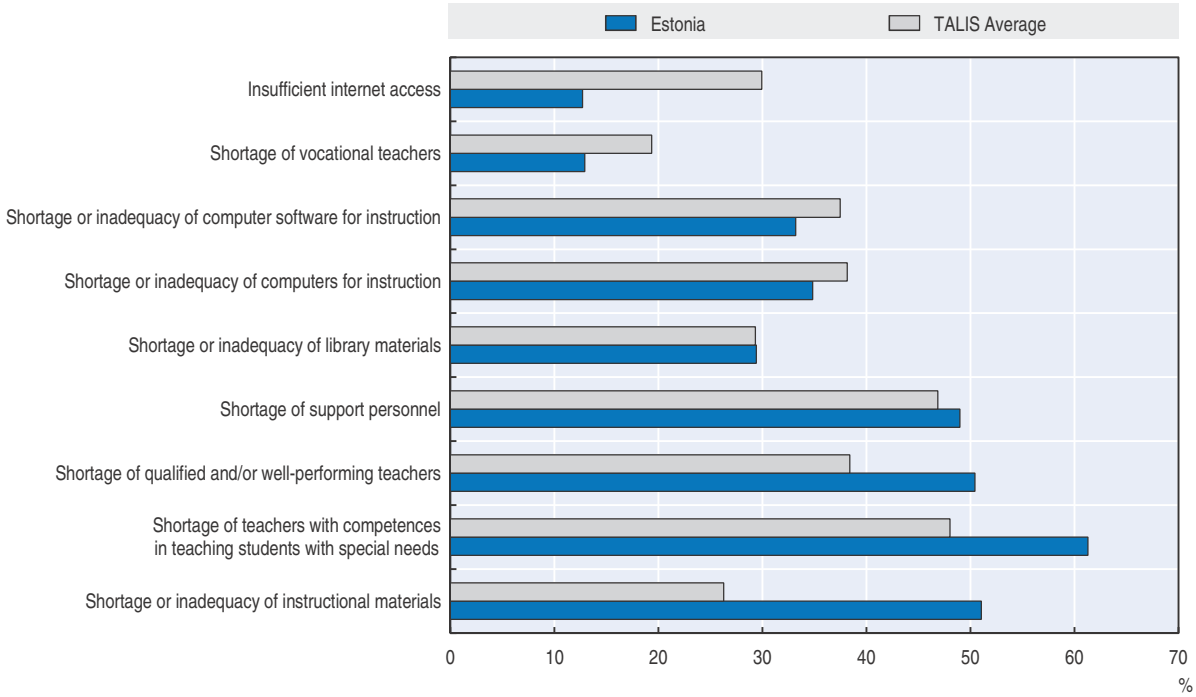
There are also concerns regarding working conditions, namely in terms of accessing adequate instructional materials and benefiting from support personnel at schools. According to TALIS 2013 data, Estonian school directors identify the inadequacy of instructional materials as the second main resource issue hindering the school's capacity to provide quality instruction, a problem perceived as much more acute than in other countries participating in TALIS (an issue affecting 51.1% of Estonian teachers, the fourth highest figure among TALIS countries, with a TALIS average of 26.3%) (see Figure 5.8). The equivalent figure for shortage of support personnel is 49.0% against a TALIS average of 46.9% (OECD, 2014b).

There are indications of an oversupply of teachers

Analysis of class size and student-teacher ratios in Estonia provide indications that, compared to the situation in other OECD countries, on the whole, Estonia has an oversupply of teachers. As described earlier, average class size and student-teacher ratios are low compared to the OECD average. PISA 2012 data, according to the perceptions of school directors, also provide little evidence of the existence of quantitative teacher shortages in Estonia (Table IV.3.11, OECD, 2013a). Quantitative shortages may only arise in very specific situations such as science teachers in rural areas and Estonian language teachers in regions where Russian as a mother tongue is prevalent.

However, there might be specific instances of qualitative shortages of teachers. According to TALIS 2013 data, 50.4% of lower secondary teachers were working in schools whose school directors reported that a shortage of qualified and/or well-performing teachers hindered the school's capacity to provide quality instruction, against a TALIS

Figure 5.8. **Percentage of teachers whose school principal reports that the following resource issues hinder the school's capacity to provide quality instruction, lower secondary education, 2013**



Notes: Includes principals reporting that the resources issues hindered quality instruction "a lot" or "to some extent".
Source: OECD (2014b), *TALIS 2013 Results: An International Perspective on Teaching and Learning*, *http://dx.doi.org/10.1787/9789264196261-en*.

average of 30.4% (OECD, 2014b). As explained in Chapter 4, the perception of shortage of qualified and/or well performing teachers appears to be dominated by the notion of "performance" shortages (see Table 4.7). In addition, as concluded earlier, there is also a low rate of teacher renewal, with few new teacher education graduates entering a profession that keeps ageing.

The criteria used to establish actual teacher compensation lack transparency

In Estonia, career advancement and actual teacher salaries are typically defined at the school level by the school director even if, in some municipalities, school directors may need to follow a municipal framework for teacher compensation, especially if it is set by a collective agreement with teacher unions. Only the minimum teacher salary is defined at the national level. According to TALIS 2013 data, 33.3% and 55.6% of Estonian lower secondary school directors reported a shared responsibility for establishing teachers' starting salaries (including setting pay scales) and determining teachers' salary increases respectively, the 5th and 2nd highest such figures among TALIS countries, considerably above the TALIS averages of 14.2% and 17.5% respectively (OECD, 2014b). Similarly, 73.9% and 63.7% of lower secondary teachers were working in schools where the school director reported that a change in teachers' salary (or a payment of a financial bonus) and a change in the likelihood of career advancement occurred "sometimes", "most of the time" or "always" after formal teacher appraisal respectively, against TALIS averages of 34.3% and 55.7% respectively (OECD, 2014b). There are some potential benefits of managing the teaching workforce mostly at the school level. It can allow school directors to do proper staff planning and reward, retain and motivate teachers, in the specific context of the school.

However, there are concerns about the transparency and subjectivity of the criteria used to determine actual individual teacher salaries (or the amount the school may pay above the minimum teacher salary) and the school-level (or municipal-level) rules for career advancement and recognition of teacher professional growth. Many of the teachers the review team spoke to indicated that rules for salary growth and potential salary rewards were not transparent. Teachers often did not know how the extra compensation (i.e. above the minimum teacher salary) was determined and whether it was based on their performance, experience, extra tasks or other aspects of their work.

A major reason for the lack of transparency in defining teachers' salaries is the absence of national regulations about a teacher career structure and ways to link teacher compensation to career advancement and responsibilities at the school. As explained earlier, the recently introduced competency-based career structure is only to be accessed by teachers on a voluntary basis and offers no links to a salary structure. Schools have not embraced this competency-based career structure in the management of their own teaching bodies. At the same time, in order to appraise teacher performance, schools generally do not use a common set of reference standards (such as the teacher professional standards developed by the Estonian Qualifications Authority). Some schools might even use criteria that raise concerns such as student examination results or results at student Olympiads. For this reason, in fact, school directors may feel inhibited to establish a closer linkage between pay and performance and increase teacher compensation more as a result of the extra responsibilities and tasks teachers assume in the school.

In addition, according to some of the school directors the review team spoke to, there is little scope for school directors to award performance-related extra payments (or go much above the minimum teacher salary) because of the limited extra money available in their budgets.

Teachers lack incentives to access higher levels of the competency-based career structure

The potential of the existing competency-based career structure, for both general and vocational education teachers, is not being adequately used. During the visit, the review team formed the impression that most teachers were not well-informed about both the teacher professional standards and the teacher qualification stages to which they could access through a certification process. Those who knew about these new processes showed little interest in engaging in them as they lacked incentives to do so. At the same time, school directors seemed to take little account of the qualification stages in the context of salary setting at the school level. Generally, the schools visited were not using the competency-based career structure as a reference to distribute roles and tasks among teachers within schools. Hence, the career structure is yet to penetrate schools' teacher management practices.

In other countries, the existence of a career structure for the most part accomplishes two important functions: the recognition of experience and advanced teaching skills with a formal position and additional compensation; and the potential to better match teachers' skills to the roles and responsibilities needed in schools, as more experienced and accomplished teachers may be given special tasks within schools (e.g. mentor teacher). These convey the important message that the guiding principle for career advancement is merit and have the benefit of rewarding teachers who choose to remain in the classroom. It happens that, in Estonia, the recently introduced competency-based career structure is

not achieving these functions. It essentially is an instrument to formally recognise teacher competencies but with no direct association with compensation and the specific roles performed at the school.

Given that the current system of teacher certification is voluntary for teachers, there is no mechanism to periodically attest that teachers are fit for the profession. Another challenge is the fact that teacher certification is mostly disconnected from school-based teacher appraisal. These processes do not inform each other, except when the teacher applying for certification includes the results of school-based appraisal in his or her portfolio.

There are a number of concerns about the operation of professional development

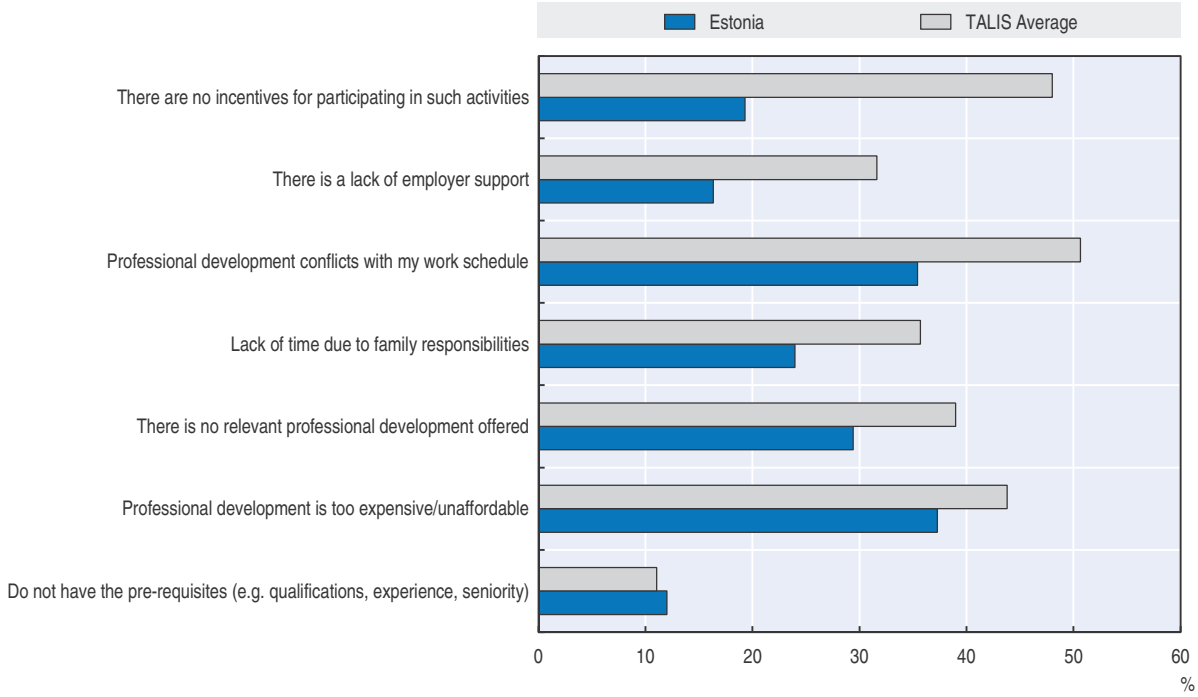
There are some concerns about the operation of teacher professional development. First, the use of results from school-based teacher appraisal to inform the teacher's professional development plan seems limited in international comparison. According to TALIS 2013 data, in Estonia only 57.4% of lower secondary teachers agree or strongly agree that teacher appraisal and feedback systems in their school are used to establish a development or training plan to improve their work as a teacher, against a TALIS average of 59.1% (OECD, 2014b). Similarly, only 46.4% of lower secondary Estonian teachers report a moderate or large positive change in the amount of professional development after they received feedback on their work at school, against a TALIS average of 45.8% (OECD, 2014b). There is clearly further room in Estonia for better linking teacher appraisal to individual professional development, which is desirable given that teacher development is one of the main goals of teacher appraisal (OECD, 2013b).

Second, even if schools organise internal processes for teacher appraisal, there seems to be limited alignment to school development plans. As explained earlier, according to TALIS 2013 data, only 58% of school directors of lower secondary schools reported having worked on a professional development plan for the school in the 12 months prior to the survey, against an average of 79.1% (OECD, 2014b). Also, only 43.4% of lower secondary Estonian teachers report a moderate or large positive change in their role in school development initiatives after they received feedback on their work at school, against a TALIS average of 50.9% (OECD, 2014b). The link between, teacher appraisal, teacher professional development and school development is essential to ensure teachers give priority to acquiring those competencies that better fit the needs of the schools (OECD, 2013b).

Third, the unaffordability of courses, conflicts with the work schedule and lack of relevance of teacher professional development activities seem to be important barriers for some Estonian teachers to engage in professional development. This is what Estonian lower secondary teachers expressed in TALIS 2013, as shown in Figure 5.9: respectively 37.3%, 35.4% and 29.4% of them agreed or strongly agreed with these three barriers, against TALIS averages of 43.8%, 50.6% and 39.0% respectively.

Fourth, even though professional development is provided in an open market with a diversity of providers, there is no process to accredit professional development programmes. Hence, the quality of the programmes is not guaranteed and little use is made of any analysis of the programmes' impact.

Figure 5.9. **Barriers to teachers' participation in professional development, lower secondary education, Estonia and TALIS average, 2013**



Notes: Percentage of lower secondary education teachers indicating that they "agree" or "strongly agree" that the reasons depicted above represent barriers to their participation in professional development.
Source: OECD (2014b), *TALIS 2013 Results: An International Perspective on Teaching and Learning*, *http://dx.doi.org/10.1787/9789264196261-en*.

There is no external validation of internal teacher appraisal processes

For regular teacher appraisal internal to the school, schools are free to use their own reference standards and appraisal criteria. Schools are not required to use the teacher professional standards developed by the Estonian Qualifications Authority as the reference for their internal teacher appraisal processes. In fact, little is known nationally regarding the actual aspects appraised and criteria used across schools for teacher appraisal.

As a result, internal teacher appraisal practices are likely to vary across schools in terms of the criteria applied and the way the results are used for professional development and teacher rewards. In this context there is a risk of potential bias or arbitrariness of teacher appraisal implemented by school directors, especially where the focus is not only on the teachers' performance but also on their personality. In the absence of widely used teaching standards and of an external validation of internal teacher appraisal processes, there are risks that teacher appraisal lacks consistency and coherence across schools.

There is a limited role for learning support staff

In recent years, Estonia has promoted the introduction of support specialists such as special education teachers, psychologists, speech therapists and social pedagogues in schools to assist with the learning of students with special needs and students with behavioural problems. This is part of the overall strategy to improve the integration of students with special needs in mainstream schools and to support the learning of students with behavioural problems. This is a move in the right direction in order to strengthen the ability of schools to respond to students' individual needs. However, the scale of such

support remains limited. For instance, as of 2013-14, a special education teacher was working in one of each four general education schools and a school psychologist was working in one out of each three general education schools (see Table 5.2). According to TALIS 2013 data, 28.8% of Estonian lower secondary teachers were working in schools with more than 10% of students with special needs, against a TALIS average of 25.5% (OECD, 2013b). More generally, there is no tradition in Estonian schools to employ learning support staff, i.e. school staff whose main function is to assist the work of teachers. Such learning support staff provide support for teachers and students and to the overall learning-related activities of schools.

There are challenges in preparing teachers for special needs education

There are indications that teachers in mainstream schools are not adequately prepared to instruct students with special educational needs. Estonian lower secondary school directors identify the shortage of teachers with competencies in teaching students with special needs as the main resource issue hindering the school's capacity to provide quality instruction, a problem perceived as much more acute than in other countries participating in TALIS (an issue affecting 61.3% of Estonian teachers, the eight highest figure among TALIS countries, with a TALIS average of 48.0%) (see Figure 5.8).

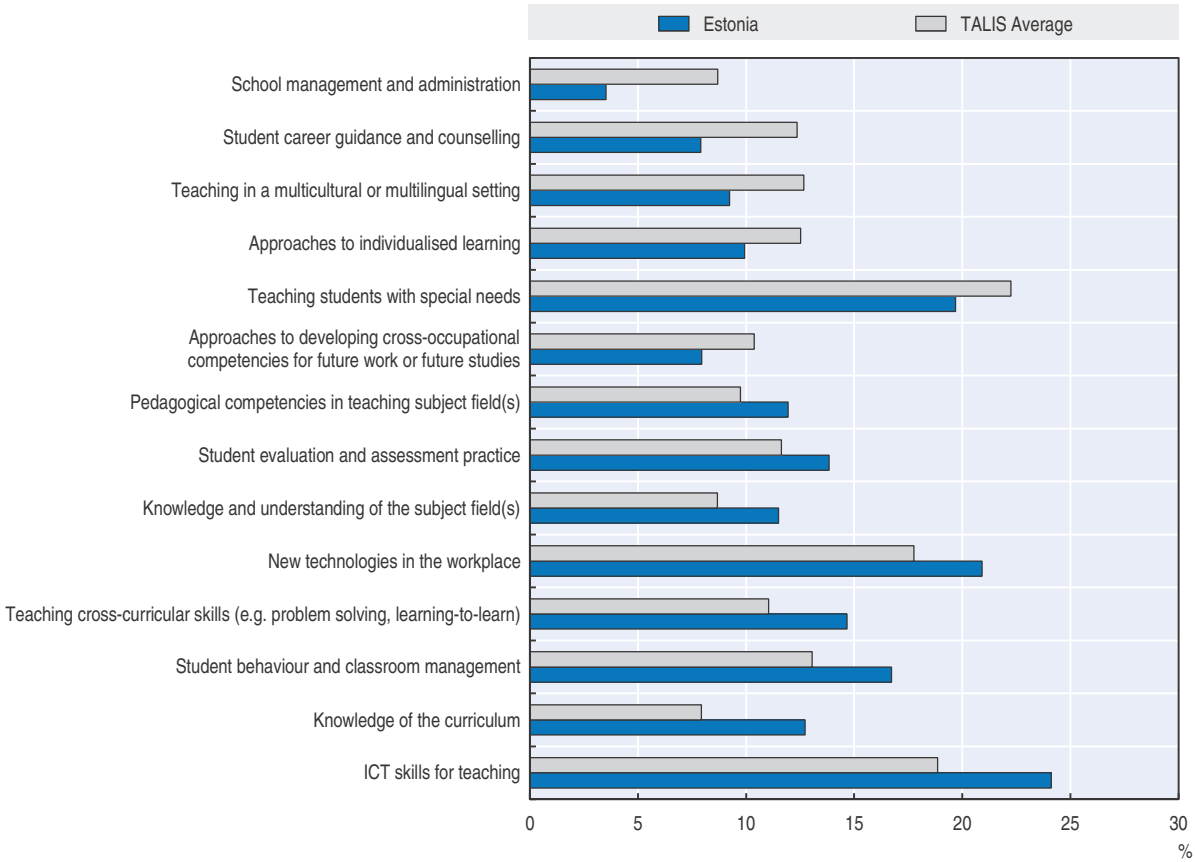
At the same time, teaching students with special needs has been identified by Estonian lower secondary teachers as one of their main needs for professional development, according to TALIS (see Figure 5.10), which might potentially indicate some shortcomings in these areas in teacher education and professional development programmes.

Policy recommendations

As school rationalisation proceeds rethink the organisation of school staff and make the teaching profession more selective

As further resources become available to the school system and as efficiency gains are realised through the school rationalisation process (see Chapter 3), a clear priority becomes the re-thinking of the organisation of school staff. First, school rationalisation is likely to require a certain degree of teacher redundancy. This entails developing strategies for reallocating, redeploying and retiring teachers currently employed in schools who will be affected by school (or class) consolidation. In part, teacher redundancy will be made easier by the high proportion of teachers who are close to retirement age. It will be important to ensure teachers who reach retirement age actually retire. Also, for teachers moving to sectors outside education, it would be important to provide them with adequate advanced notice for them to prepare their professional conversion. This could go alongside some financial support for specific training which could facilitate their transition to other sectors of activity. Also, for some teachers, there are a number of areas in which teachers made redundant by school consolidation could assume new responsibilities in schools in view of strengthening schools' ability to respond to a greater variety of needs. These include engaging them to help integrate special needs students in mainstream schools and classes; using them to implement strategies to individually support students with learning difficulties; and involving them in advisory roles within or across schools. This could go alongside offering early retirement packages for some teachers who are close to retirement age.

Figure 5.10. **Teachers' needs for professional development, lower secondary education, Estonia and TALIS average, 2013**



Note: Percentage of lower secondary education teachers indicating they have a high level of need for professional development in the areas indicated.
Source: OECD (2014b), *TALIS 2013 Results: An International Perspective on Teaching and Learning*, *http://dx.doi.org/10.1787/9789264196261-en*.

Second, in spite of the fact that there is an overall oversupply of teachers in the Estonian school system, it is important for the school system to ensure a given rate of teacher renewal so the school system is continuously provided with new ideas and perspectives. It is important that newly educated teachers are not lost for the profession. But, clearly, Estonia has the opportunity to be more selective about those who are employed and those who enter the profession and initial teacher education. Given that not a lot of new teaching posts are likely to be available in the coming years, it is clear that entry into preparation programmes can be much more selective to ensure only high-quality graduates fill the available teaching posts. Potentially useful initiatives include: providing more information and counselling to prospective teacher trainees so that better informed enrolment decisions are made; procedures that try to assess whether the individuals wanting to become teachers have the necessary motivation, skills, knowledge and personal qualities (specific assessments); incentive schemes to recruit candidates with high-level competencies (such as the currently offered teacher education scholarship); and flexible programme structures that provide students with school experience early in the course, and opportunities to move into other courses if their motivation towards teaching changes. This could go alongside initiatives at the starting

point of the teacher's career strengthening requirements to enter the profession, in addition to better incentives for beginning teachers, to ensure high-quality graduates actually enter the teaching profession.

Third, a priority is also to improve the working conditions in Estonian schools. There is room to improve the salaries of pre-primary education teachers to bring them closer to the salaries of other teachers. At the same time, greater efforts are needed to better resource individual schools so they are able to provide better instructional materials to teachers, more relevant professional development for teachers (see below), and better conditions for individual student support. The latter may include the expansion of learning support staff in schools which should be part of an overall agenda to improve the ability of schools to provide individual support for students with special needs and learning difficulties. There are several mechanisms through which learning support staff can have a positive impact on student attainment. With an additional professional in class, students receive more individual help and attention from either the learning support staff or the teacher. Therefore, students' learning needs are more likely to be met, which is likely to lead to greater achievement. In addition, the use of learning support staff enables a more flexible learning environment, and groups of different size and characteristics can be created to better respond to students' needs and allow increased engagement and inclusion of children in classroom activities (Masdeu Navarro, 2015).

Make external periodic teacher certification a requirement for teachers

A competency-based career structure has recently been introduced and is currently offered, on a voluntary basis, by the Estonian Association of Teachers, as the awarding body. The career structure distinguishes between several career stages associated with given competencies described in teacher professional standards developed by the Estonian Qualifications Authority. However, as it currently stands, the competency-based career structure is not achieving the most typical functions of a teacher certification process: quality assurance; association of greater experience and skills with a formal position and additional compensation; and association of career stages with formally recognised roles and tasks within schools. Hence, the current system is not being used to its potential and, as a result, it does not provide incentives for teachers to access it.

It would be beneficial to make external periodic teacher certification a requirement for teachers using the existing competency-based career structure. Teacher certification, to access the different stages of the career, would have as its main purposes providing public assurance with regard to teachers' standards of practice, determining advancement in the career, and informing the professional development plan of the teacher. This approach would convey the message that reaching high standards of performance is the main road to career advancement in the profession. At the same time, a teacher certification system should provide incentives for teachers to update their knowledge and skills and reward teachers for their performance and experience. The suggestion is not to replicate the previous attestation system. The attestation system was not a competency-based process (but rather a process based on the acquisition of qualifications and professional development credits), it was too resource-intensive and it did not concentrate on the core work of teachers. It is also recognised that schools and their leadership need time to understand the value of the competency-based career structure and the associated certification processes. The idea is that, in the medium-term, the certification process

(alongside the competency-based career structure) is integrated, in ways to be defined by individual schools, in school-based approaches to human resource management, as suggested below.

Access to career stages beyond "Teacher (level 7.1/level 6)" could be through a voluntary application process, and teachers not applying for such promotion should be required to maintain their basic certification status as Teacher (level 7.1/level 6). This would involve each permanent teacher periodically (e.g. every four years) being subject to a formal appraisal for certification, or re-certification. The purpose would be to confirm the teachers as fit for the profession. The results of the certification process could influence the speed of career and salary progression, as dictated by school-level (or municipal-level) salary progression rules (see below). The certification appraisal should also constitute an opportunity to identify underperformance.

Given the proposed high stakes of teacher certification, it is appropriate to use a national framework (such as the teacher professional standards) and standard procedures as well as an external component (such as the certification committees organised by the Estonian Association of Teachers) to ensure objectivity and fairness (Santiago and Benavides, 2009). Also, instruments used in teacher certification need to capture the quality of teachers' practices in the classroom, namely classroom observation and teacher portfolios providing evidence of teachers' work. Hence, classroom observation could become a systematic instrument used in teacher certification.

Link teacher certification to school-based teacher appraisal

School-based teacher appraisal for professional development and appraisal for certification cannot be disconnected from each other. A possible link is that appraisal for certification needs to take into account the qualitative assessments produced through school-based teacher appraisal, including the recommendations made for areas of improvement. School-based teacher appraisal should also have a function of identifying sustained underperformance. Similarly, results of teacher certification appraisals can also inform the professional development of individual teachers.

Require schools or municipalities to design career advancement systems that recognise teacher certification levels

An approach to make actual teacher compensation more transparent at the school level is to require schools and/or municipalities to design salary scales which recognise the competency-based career structure defined nationally by the Estonian Qualifications Authority. This would mean that salary scales defined at the school or municipal level should ensure that career progression as dictated by certification levels should be associated with salary progression. Within this regulation, schools and municipalities would still have enough freedom to associate pay levels with other aspects of a teacher's work such as the roles and responsibilities performed at the school, years of experience or performance as appraised at the school level.

Another requirement for the schools and municipalities would be to formally recognise specialised roles at the school (e.g. mentor teacher; co-ordinator of professional development) and associate them with the different certification levels (Teacher, Senior Teacher, Master Teacher), i.e. the acquisition of certain certification levels should be a requirement to perform given roles at the school level. Also, in order to ensure transparency, school-level or municipality-level salary progression rules should be approved by the board of trustees and be made public.

Promote the use of teacher professional standards across the system

The review team strongly encourages the Estonian education system to promote the use of the teacher professional standards developed by the Estonian Qualifications Authority. These standards can become a powerful mechanism for aligning the various elements involved in developing teachers' knowledge and skills. They should provide a common basis for initial teacher education, mentoring of beginning teachers, regular school-based teacher appraisal, teacher certification, professional development and career advancement (OECD, 2013b). This would provide coherence for the teaching profession and a more consistent application of teacher appraisal, professional development and career advancement across teachers and schools.

The promotion of professional standards for teachers should include a strategy for disseminating them: a variety of actors at different levels and from different contexts should participate in information and discussion sessions, to generate knowledge and ownership of standards across the country. This should go alongside the preparation of tools and guidelines to use the standards for a range of purposes such as teacher appraisal. There is also a need to ensure appropriate feedback mechanisms: following implementation, standards can have periodical revisions to ensure that they remain aligned with other elements of the system, and that they are useful in the promotion of teacher professionalism. Another objective is that these standards are clear to teachers. This "making sense" of standards by teachers is essential to transform their practice. Extensive socialisation of standards for teachers can be done at several stages of teachers' careers (NBRC, 2010):

- During initial teacher education courses so that beginning teachers already have a clear understanding of what is expected from them.
- In mentoring programmes to ease the transition between initial education and school-level practice (Hobson, 2009).
- In-service teachers must receive training on the use of standards and their implications for classroom practice.

Strengthen school-based teacher appraisal as the main process for teacher development

The tradition of school-based teacher appraisal is a key strength of the Estonian approach to the management of the teaching workforce. The current system for internal appraisal is based on a non-threatening evaluation context, a focus on classroom observation, supportive school leadership and a culture of feedback. This emphasis on teacher appraisal which is predominantly for teacher development should be maintained and strengthened through the following improvements:

- *Ensuring the teacher professional standards are used:* The use of teaching standards will bring the necessary reference to guide teachers through their development and will better link school-based teacher appraisal to other aspects of teacher policy such as appraisal for certification, career advancement and professional development. It will also make school-based teacher appraisal more coherent and consistent across schools given that a common reference would be used.
- *Ensuring teacher appraisal results shape individual teachers' professional development plan:* For teacher appraisal to have an impact on learning outcomes in the school, it needs to be closely connected to professional development. This link is not yet systematic in Estonian

schools. The focus of teacher appraisal should be to contribute to a knowledge-rich teaching profession in which teachers engage actively with new knowledge and benefit from support structures to generate improvement (Santiago and Benavides, 2009).

- *Ensuring teacher professional development links to school development:* In order to meet the school's needs, the professional development opportunities of an individual teacher should also be aligned with the school's development plan. In Estonia, there is room to reinforce this link.
- *Ensuring school leaders strengthen their instructional leadership skills:* School-based teacher appraisal would benefit from the enhancement of school leaders' appraisal and evaluation competencies, as suggested in Chapter 4. This would imply improving school leader's skills for effective observation, feedback and coaching for their teachers and whole-school evaluation processes (see also Chapter 4).

The main purpose of school-based teacher appraisal should continue to be continuous improvement of teaching practices. It should be an internal process carried out by line managers, senior peers and the school director with a focus on teachers' practices in the classroom. The main outcome would be feedback on teaching performance and contribution to school development, which should lead to an individual plan for professional development. It can be low-key and low-cost and include a mix of methods appropriate to the school. Some of the elements should be individual goal-setting linked to school goals, self-appraisal, peer appraisal, classroom observation, structured conversations with the school directors and peers.

In order to guarantee the systematic and coherent application of school-based teacher appraisal across Estonian schools, it would be important to undertake the external validation of the respective school processes. An option is for inspection processes conducted at the county level to include the audit of the processes in place to organise teacher appraisal, holding the school director accountable as necessary. While the use of professional teaching standards as the main reference for teacher appraisal will support the consistency of school-based teacher appraisal across schools, there is still a need to ensure these processes are appropriately conducted in all schools. This could be part of a greater externality to evaluating school processes, as suggested in Chapter 4.

Ensure the relevance of professional development for teachers and accredit programmes

As analysed earlier, Estonian teachers express some concerns about the unaffordability of professional development courses as well as their lack of relevance. This might result from the fact that those programmes they consider more relevant are not offered free of charge. At the same time the lack of relevance might result from a lack of information of providers about professional development needs of teachers as identified at the school level. In part, this might be explained by the limited connection between school-based teacher appraisal, professional development of individual teachers and school development strategies. As suggested above, these connections need reinforcement. At the same time, suppliers of professional development programmes need to better connect to the professional development needs identified by individual schools. Possibly, the recent "recentralisation" of provision, co-ordinated by institutions such as the Innove Foundation will help ensure professional development offerings are more relevant for Estonian teachers.

In this context, it is particularly important to introduce a process for accrediting individual professional development programmes. The accreditation would ensure the quality of programmes and give special attention to their relevance to Estonian teachers. It should engage in an assessment of the impact of individual programmes and take into account the level of satisfaction of teachers.

Strengthen the preparation of teachers to instruct students with special needs

There is a clear need to strengthen the preparation of teachers to instruct students with special educational needs. This is an important dimension to the current efforts to integrate students with special needs in mainstream schools. It calls for initial teacher education institutions to ensure that special needs becomes a regular area for the initial education of any teacher, regardless of the type of school at which he or she will teach. This would respond to a strong need in schools for these particular skills. In addition, it is also important to foster professional development programmes targeted at developing skills to integrate special needs students in mainstream schools.

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ANNEX A

The OECD Review of Policies to Improve the Effectiveness of Resource Use in School

The **OECD Review of Policies to Improve the Effectiveness of Resource Use in Schools** (also referred to as the School Resources Review) is designed to respond to the strong interest in the effective use of school resources evident at national and international levels. It provides analysis and policy advice on how to distribute, utilise and manage resources so that they contribute to achieving effectiveness and efficiency objectives in education. School resources are understood in a broad way, including financial resources (e.g. expenditures on education, school budget), physical resources (e.g. school buildings, computers), human resources (e.g. teachers, school leaders) and other resources (e.g. learning time).

Fifteen education systems are actively engaged in the review. These cover a wide range of economic and social contexts, and among them they illustrate quite different approaches to the use of resources in school systems. This will allow a comparative perspective on key policy issues. Participating countries prepare a detailed background report, following a standard set of guidelines. Some of the participating countries have also opted for a detailed review, undertaken by a team consisting of members of the OECD Secretariat and external experts. Insofar, the participating countries are (in bold those that have opted for an individual review): **Austria**, **Belgium (Flemish Community)**, Belgium (French Community), **Chile**, the **Czech Republic**, **Denmark**, **Estonia**, Iceland, **Kazakhstan**, **Lithuania**, Luxembourg, the **Slovak Republic**, Spain, Sweden and **Uruguay**. A series of thematic comparative reports from the OECD review, bringing together lessons from all countries, will be launched as of late 2016.

The project is overseen by the Group of National Experts on School Resources, which was established as a subsidiary body of the OECD Education Policy Committee in order to guide the methods, timing and principles of the review. More details are available from the website dedicated to the review: *www.oecd.org/education/schoolresourcesreview.htm*.

ANNEX B

Composition of the OECD Review Team

Anthony Levitas has been providing, for the last twenty years, analytical and political advice on local government reform to elected officials and civil servants in Central and Eastern European Countries. He helps policy makers decide what responsibilities sub-national governments should have and where they should get the money to pay for them. In particular, he provides support in designing predictable, adequate, and equitable transfer systems; in developing sound rules for local government taxation, budgeting, investment planning, and financial reporting; and in creating and regulating municipal debt markets. He has also worked extensively on school management and finance. Anthony has been instrumental in developing and implementing local government reform programmes in Poland, Macedonia, Serbia, Bosnia and Herzegovina, and Albania. He has also worked in Ukraine, Turkey, Mongolia, Georgia and Armenia. In Poland, where he has lived for most of the past two decades, he has been deeply involved with the decentralisation of primary and secondary education and until recently served as Research Director of the Ministry of Education's Local Government School Management unit.

Péter Radó is an expert in educational policy analysis and evaluation based in Budapest, who divides his time between university teaching and working as a consultant in Central-Eastern Europe, South-Eastern Europe and Central Asia. He is teaching courses on the analysis of education systems and educational policy. He has contributed to a number of technical assistance programmes, participated in several capacity building programmes and evaluation programmes at a European scale. He has also published more than 60 studies and books in various European languages. Between 1994 and 1996 Péter was the head of the Directorate of Civil Relations in the Ministry of Culture and Education where he was in charge of Minorities, Youth, Hungarians in the Neighbouring Countries and Non-profit Organisations. Later he was a research associate of the Research Centre of the National Institute for Public Education. From 1998 he has been working as the Assistant Director of the Institute for Educational Policy in the Open Society Institute, Budapest. Between 2003 and 2007 he was the director of the Centre for Educational Policy Analysis in Hungary. Currently he works as the senior consultant at Expanzió Consulting Ltd and continues working as an expert for various international organisations.

Paulo Santiago, a Portuguese national, is a Senior Analyst in the OECD Directorate for Education and Skills, where he has been since 2000. He is currently the co-ordinator of the OECD School Resources Review. He has previously assumed responsibility for three major cross-country reviews, each with the participation of over twenty countries: a review of teacher policy (2002-05), leading to the OECD publication "Teachers Matter"; the thematic

review of tertiary education (2005-08), leading to the OECD publication "Tertiary Education for the Knowledge Society"; and a review of evaluation and assessment policy at the school level (2009-13), leading to the OECD publication "Synergies for Better Learning". He has also led reviews of teacher policy, tertiary education policy and educational evaluation policy in over 25 countries. He holds a Ph.D. in Economics from Northwestern University, the United States, where he also lectured. He co-ordinated the review and the preparation of this report.

Claire Shewbridge, a British national, is an Analyst in the OECD Directorate for Education and Skills and currently working on the School Resources Review. She most recently co-authored the OECD report "Synergies for Better Learning" (2013) taking responsibility for analysis on school evaluation and education system evaluation. Prior to that, she worked on the "OECD Review on Migrant Education", co-authoring the OECD report "Closing the Gap for Immigrant Students" (2010). For five years, Claire worked on the Programme for International Student Assessment (PISA), leading analysis of student attitudes towards science learning and the environment in the PISA 2006 survey, co-authoring "Are Students Ready for a Technology Rich World? What PISA Studies Tell Us" (2005) and co-ordinating OECD reports on excellent students, success and challenges for immigrant students, student competencies in general problem solving and mathematics. She also worked on OECD statistical publications *Education at a Glance* and the *OECD Employment Outlook*.

ANNEX C

Visit programme

Monday, 20 October 2014, Tallinn	
08:00-09:15	Ministry of Education and Research: Finance and Planning • Deputy Secretary-General for Planning • Head of Finance Department
09:30-10:00	Ministry of Education and Research • Mr Jevgeni Ossinovski, Minister • Adviser
10:15-11:15	Ministry of Finance • Deputy Head of the State Budget Department • Adviser of the Local Governments Financial Management Department
11:30-12:30	Prime Minister's Office – State Chancellery • Counsellor, Strategy Unit
13:30-14:30	National Audit Office • Head of the Local Governments´ Audit Department • Senior Auditor, Local Governments´ Audit Department • Auditors, Performance Audit Department
14:45-15:30	Association of Municipalities of Estonia and Association of Estonian Cities • Vice Chairman of the Association of Municipalities of Estonia • Executive Director of the Association of Estonian Cities
15:45-16:30	Estonian Qualifications Authority (Kutsekoda) • Counsellor, Estonian Qualifications Authority
16:45-17:45	Association of Teachers and Estonian Education Personnel Union • Association of Teachers • Estonian Education Personnel Union
Tuesday, 21 October 2014, Tartu	
08:00-10:30	**School Visit 1: Tartu Kroonuaia Kool – Tartu** (municipal, special school, basic education) • Management group • Group of teachers • Group of students • Members of the board of trustees
11:00-12:40	Municipality of Tartu • Head of the Department of Education • Vocational and general upper secondary education expert • Basic education expert • School funding officer • Head of the Finance Department • Budgeting Service expert
13:45-14:45	Ministry of Education and Research: Analysis, including information systems • Deputy Head of the Analysis Department • Chief Analyst, Analysis Department • Programme Analyst, Analysis Department

Tuesday, 21 October 2014, Tartu (cont.)	
15:00-16:25	Ministry of Education and Research: General Education, Vocational Education and Special Education • Head of the General Education Department • Deputy Head of the General Education Department • Head of the Vocational Education Department • Deputy Heads, Vocational Education institutions
16:30-17:30	Ministry of Education and Research: Teachers • Head of the Teachers Department
Wednesday, 22 October 2014, Tartu, Jõhvi	
08:00-08:40	Ministry of Education and Research: School Infrastructure and EU Structural Funds • Deputy Secretary-General for Planning • Head of the State Property Department • Property Analyst, State Property Department • Head of the EU Structural Funds Department • Chief Expert, EU Structural Funds Department
08:45-09:25	Ministry of Education and Research: External Evaluation • Deputy Secretary-General for General and Vocational Education • External Evaluation Department • Analysis Department
09:25-10:25	Ministry of Education and Research: School Network • Head and Deputy-Head of the School Network Department • School Network Development Manager • Management adviser
13:00-15:30	**School Visit 2: Ida-Virumaa Kutsehariduskeskus – Jõhvi** (state, vocational education) • Management group • Group of teachers • Group of students • Members of the advisory board
16:00-17:00	Municipality of Jõhvi • Municipality Mayor • Education Department • Finance Department • School Director (new state upper secondary school)
Thursday, 23 October 2014, Narva, Vaivara Vald	
08:00-10:30	**School Visit 3: Narva Soldino Gümnaasium – Narva** (municipal, full cycle) • Management group • Group of teachers • Group of students • Members of the board of trustees
10:45-12:15	Municipality of Narva • Education Department • Finance Department
13:30-16:00	**School Visit 4: Sinimäe Põhikool** (municipal, rural school) • Management group • Group of teachers • Group of students • Members of the board of trustees
16:15-17:15	Municipality of Vaivara Vald • Municipality Mayor • Finance Department

Friday, 24 October 2014, Tallinn	
08:00-10:30	**School Visit 5: Tallinna Tööstushariduskeskus – Tallinn** (state, vocational education) • Management group • Group of teachers • Group of students • Members of the advisory board
11:00-12:30	Municipality of Tallinn • Head of Education Services, Education Department • Director of Financial Services, Education Department
13:30-14:20	Estonian Co-operation Assembly (Eesti Koostöö Kogu) and Education Forum (Eesti Haridus Foorum) • Programme Managers, Estonian Co-operation Assembly • Chairperson of the Education Forum
14:30-15:20	Representatives of providers of initial teacher education and professional development • Institute of Education, University of Tartu • Centre for Educational Technology of the Institute of Education, University of Tartu • Head of the Centre for Innovation in Education, Tallinn University
15:30-16:20	Estonian School Student Council's Union • Chairperson
16:30-17:30	Association of Parents and representatives of the interests of students with special needs • National Parents' Association • The Estonian Chamber of Disabled People • Association of Parents with Disabled Children

Monday, 27 October 2014, Tallinn	
08:00-10:00	**School Visit 6: Rocca al Mare Kool – Tallinn** (private) • Chief Executive Officer • Management group • Group of teachers • Group of students • Group of parents
10:30-11:15	Associations representing Private Schools • Chairperson of the Estonian Private Basic Education Union • Chairperson of the Waldorf Schools Union
11:15-12:00	Innove Foundation • Chairman of the board • Representatives of several departments
12:10-12:45	Representatives of businesses and employers • Chairman of The Estonian Employers' Confederation
13:30-15:00	Researchers' seminar • Ms Laura Kirss, Praxis Centre for Policy Analysis • Ms Kerly Espenberg, RAKE Research Centre, University of Tartu • Mr Janno Järve, CENTAR – Centre for Applied Research • Ms Riin Pärnamets, Estonian Studies Centre (Eesti Uuringuskeskus) • Ms Pille Hillep, Estonian Studies Centre (Eesti Uuringuskeskus) • Ms Anne Reino, Sinekuur Consulting Services • Ms Pille Mõtsmees, Sinekuur Consulting Services • Mr Mati Heidmets, Centre for Educational Policy, Tallinn University
15:10-16:00	Final delivery by the review team: Preliminary impressions

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Contents

Chapter 1. School education in Estonia

Chapter 2. Governance of schooling and the organisation of the school network in Estonia

Chapter 3. Funding of school education in Estonia

Chapter 4. School organisation and operating schools in Estonia

Chapter 5. The teaching workforce in Estonia

Consult this publication on line at ***http://dx.doi.org/10.1787/9789264251731-en.***

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