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 aymnasiums 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 selfevaluation, 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 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 selfevaluation 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 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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