Improving Schools in Sweden:

An OECD Perspective

OECD

BETTER POLICIES FOR BETTER LIVES

IMPROVING SCHOOLS IN SWEDEN: AN OECD PERSPECTIVE

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Foreword

The highest performing education systems across OECD countries are those that combine excellence with equity. A thriving education system will allow every student to attain high level skills and knowledge that depend on their ability and drive, rather than on their social background. Sweden is committed to a school system that promotes the development and learning of all its students, and nurtures within them a desire for lifelong learning.

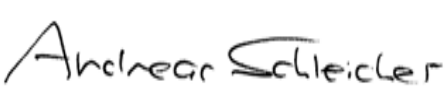
PISA 2012, however, showed a stark decline in the performance of 15-year-old students in all three core subjects (reading, mathematics and science) during the last decade, with more than one out of four students not even achieving the baseline Level 2 in mathematics at which students begin to demonstrate competencies to actively participate in life. The share of top performers in mathematics roughly halved over the past decade.

Sweden has used these disappointing findings to foster a national debate on how to raise the quality of school education and to build a broad consensus on changes in the education system.

Improving Schools in Sweden: An OECD Perspective seeks to support this process. The report draws on key lessons from high performing and rapidly improving education systems as well as on the research and analysis of education policy and practice in Sweden undertaken by the OECD as part of this project. It identifies three priorities for Sweden, namely to:

- Establish the conditions that promote quality with equity across Swedish schools.
- Build capacity for teaching and learning through a long-term human resource strategy.
- Strengthen the steering of policy and accountability with a focus on improvement.

Across the world, Sweden was once seen by many as a model for high quality education, and it possesses many of the ingredients to become that again. Among these is the unwavering commitment of its citizens and policy-makers from across the political spectrum to do whatever it takes to provide all children with the knowledge, skills and values that they need to succeed in tomorrow's world. The OECD is there to help Sweden rise to that challenge.



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Acknowledgements

This report is the result of an analysis of Sweden's context and policies and of relevant international best practices to support school improvement. The full process involved a background report prepared by the Swedish government, an OECD pre-visit to define the key areas for review, an OECD team review visit to Sweden in October 2014 (see Annexes A and B), and many exchanges and consultations with experts and stakeholders in Sweden and internationally.

The OECD review team is indebted to the Swedish government for supporting this initiative, under the leadership of the Ministry of Education and Research (MoER). Special appreciation is due to OECD-Sweden Education Policy Review Steering Group members Annica Dahl, Anna Westerholm, Johan Lindell, Kerstin Hultgren, Merja Strömberg, Anna Barklund, Peter Johansson and Annika Hellewell for their guidance and support in conducting the review. We are also grateful to Annika Hellewell and Merja Strömberg for organising the review visit, and to Annika Hellewell and Peter Johansson for co-ordinating the whole review process.

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Executive Summary

Sweden's school system is in need of urgent change

Education is a public priority in Sweden. The country is committed to a school system that promotes development and learning for all students and nurtures their desire for lifelong learning. But student performance on the Programme for International Student Assessment (PISA) has declined dramatically, from near the OECD average in 2000 to significantly below the average in 2012. No other country participating in PISA saw a steeper decline than Sweden over that period.

These disappointing results fuelled a national debate on the quality of school education, leading to a broad consensus on the need for change. Sweden responded with a range of reforms designed to reverse the negative trend in student performance and set the country on a trajectory towards educational excellence. However, more consistent and coherent efforts are required at both national and local levels to make Sweden's commitment to excellence and equity in education a reality for all schools and all students.

To make sustained improvements for all its students, Sweden can build on its strengths:

- Sweden's disappointing performance on PISA has sparked the national debate on the quality and future of education in Sweden which seems to have resulted in a broad consensus on the need for change and support for the various school reforms and policies that the Swedish government has embarked on in recent years.
- Sweden has a comprehensive school system that emphasises inclusion and is relatively equitable. PISA results show that Sweden has relatively small variations in performance between schools, although performance variation has increased from 2003 to 2012.
- Student motivation for learning mathematics is high and student-teacher relationships are relatively good. Most Swedish students are positive about their education and feel it is useful.
- The Swedish school system has a long-standing tradition of support for disadvantaged students, and students with special education needs are mainstreamed into regular schools and classes. Although a gap remains between the performance of immigrant and non-immigrant students, it cannot explain the decline in performance.

Coherent policy responses are needed to tackle current challenges:

- Student performance in Sweden is low compared to many other OECD countries and has been decreasing over the last decade, with large numbers of low performers and few high performers in all PISA domains.

- Learning environments are not always conducive to learning and sufficiently challenging, and there are considerable challenges in terms of student truancy and perseverance in learning.
- Conditions in the system are not conducive to nurturing excellence in the teaching profession. Teaching is considered a low-status and relatively unattractive profession, partly due to the heavy workload, relatively low salaries for experienced teachers and limited opportunities for appraisal and feedback. Principals and their employers do not accord sufficient priority to pedagogical leadership. In addition, the heavy workloads, unclear relationships and distrust between principals and their employers have contributed to high turnover.
- There is a lack of capacity and clarity in roles and responsibilities at various levels of the education administration, and local autonomy is not matched with adequate public accountability. These are key challenges for improving student performance.
- Lack of clarity and differing views on education priorities are diluting school improvement efforts and have led to cherry-picking of priorities at the local level. Unclear education priorities and a piecemeal approach to reform hinder the alignment, coherence and potential impact of reforms and policies.
- In addition, assessment and evaluation arrangements remain underdeveloped, leading to a lack in coherence and unreliable data and information on student performance.

An ambitious reform agenda for school improvement in Sweden

To respond to these challenges, Sweden should implement a comprehensive education reform to bring about system-wide change and strengthen the performance of all Swedish schools and students. It needs to define priorities, establish clear education responsibilities across the system and consistently provide appropriate support and challenge to schools, municipalities and private organisers in their improvement efforts. A number of concrete interrelated recommendations are proposed as the foundation for this national consolidated school-reform effort:

Establish conditions that promote quality with equity across Swedish schools:

Set high expectations for all students, building on the existing curriculum. Swedish schools can respond better to decreasing student engagement and performance by setting clear and high expectations for all students, building on current curriculum goals with a focus on developing core skills and enhancing skills for the 21st century. They should ensure a better disciplinary climate and teaching and learning approaches that respond to diverse student learning needs, including low and high performers. Preventive approaches should also be enhanced to ensure that all students consolidate basic skills from early stages onwards.

Consolidate support to disadvantaged groups. Sweden should mainstream support for integration of migrant students more consistently across the country. Current efforts are *ad hoc* and depend on the capacity of municipalities to take on additional resources or projects from the National Agency for Education or other independent approaches. A coherent strategy to better integrate migrants in schools and Swedish society can build on current efforts, which include language learning, targeted resources, parental language training, and specific training and support for teachers and school leaders.

Review school funding to ensure quality learning opportunities for all students. Review current funding mechanisms to ensure that they are effectively targeted to education and respond to equity and quality objectives, and ensure that funding strategies are evaluated and followed up for effectiveness. Provide more support to local authorities to enhance their capacity to design and deliver programmes that target equity.

Revise school-choice arrangements to ensure quality with equity. Improve the access of disadvantaged families to information about schools and support them in making informed choices. In addition, introduce controlled choice schemes that supplement parental choice to ensure a more diverse distribution of students in schools. To encourage a culture of collaboration and peer learning, consider defining national guidelines to ensure that municipalities integrate independent schools in their planning, improvement and support strategies.

Build capacity for teaching and learning through a long-term human resource strategy:

Create a publicly-funded National Institute for Teacher and School Leader Quality. The institute should bring together members of the research community, representatives of the practitioner community, and representatives of major governance organisations to develop a human resource strategy focused on recruitment of talent and professional growth for teachers and school leaders.

Review the number and quality of existing providers of teacher education. The review should examine capacity, focus, and resources in existing teacher education programmes in Sweden, as the first step to building an overall human resource strategy for the sector.

Improve attractiveness of the teaching and school leadership profession. As part of a larger effort to create a well-designed career structure that recognises and challenges educators throughout their careers, this includes raising salaries; developing professional standards to underpin appraisals and career structure; more selective entry into teacher education programmes; and adequately resourced continuous professional development for educators to support school improvement efforts.

Strengthen steering of policy and accountability with a focus on improvement:

Together with key stakeholders, define a set of ambitious education priorities. A multi-stakeholder Education Policy Council (or similar body) should be established to advise on setting priorities for the system, based on a forward-looking perspective of Sweden's economic and social progress. These priorities should be pursued consistently at all levels, supported by mechanisms for building ownership through early engagement. Objectives should build on the expectations set for students to ensure quality and equity.

Develop a comprehensive national school-improvement strategy. To bring about system-wide change, the strategy should encourage pursuit of agreed objectives, raise ambitions and expectations of all students, establish clear roles and accountabilities, and build quality among teachers and school leaders, based on the work of the National Institute for Teacher and School Leadership Quality. The strategy should encourage partnerships between municipalities, private organisers and schools to foster mutual support and development. An assessment and evaluation framework should be developed to monitor progress on implementation of the strategy and overall results.

Strengthen school self-evaluation and planning through an agreed set of indicators. Strengthen self-evaluation and innovation by developing an agreed set of

indicators for both internal and external evaluation and to inform school improvement planning. The requirement for self-evaluation reporting by schools should be reinstated in an appropriate form.

Strengthen the School Inspectorate to shift from a culture of administrative compliance to responsibility for improvement. This requires strengthening and expanding the role of the School Inspectorate through: 1) a more critical identification of strengths and areas of improvement, follow-up, promotion of networking, and robust self-evaluations; and 2) reports on effectiveness of the efforts of municipalities and private organisers to improve the quality of education in their schools. In addition, school leaders should be encouraged to play a direct role in inspection by, for example, becoming peer evaluators.

Part I:

A school system in need of urgent change

Chapter 1:

School education in Sweden: Strengths and challenges

This chapter sets out the background for this review, outlining the current strengths in Sweden's school system and the challenges it faces in view of declining student performance on the Programme for International Student Assessment (PISA).

The Swedish Ministry of Education and Research invited the OECD to conduct this review on the quality of school education in Sweden with a primary focus on compulsory education (primary and lower secondary). Its objectives were to: 1) identify the main reasons for the decreasing trends in Swedish students' performance; 2) draw on lessons from PISA and other benchmarking countries/regions with an expert analysis of key aspects of education policy in Sweden; and 3) highlight areas of policy and its implementation which might add further value to Sweden's efforts to improve student performance.

Drawing on lessons from PISA, policy lessons from benchmarking education performers, research and analysis of key aspects of education policy in Sweden and a visit to Sweden by the OECD-Sweden review team, Improving Schools in Sweden: An OECD Perspective*, aims to help Sweden and other countries better understand the issues surrounding equity and quality of the school system and identify approaches for raising student performance. Recommendations focus on: 1) creating the conditions for quality with equity across Swedish schools; 2) building capacity for teaching and learning through a long-term human resource strategy; and 3) strengthening steering of policy and accountability, with a focus on improvement.*

Introduction and background

The Swedish Education Act states that all children shall have equal access to education and that all children shall enjoy this right regardless of gender, residence or social or economic factors. It states that the school system should promote development and learning of all students and a lifelong desire to learn. International research evidence shows that addressing both quality and equity of a country's education system can help shape its future. An education system in which all students have opportunities to learn can strengthen the capacity of individuals and societies to contribute to economic growth and social well-being.

Education is a public priority in Sweden. However, over the past decade, average performance in Sweden declined from a level above or around the OECD average to below the average in all three core subjects (reading, mathematics and science) measured in the Programme for International Student Assessment (PISA) (OECD, 2014a). Though other international data sources and national data had previously shown there was reason to be concerned about the quality of the school system, the disappointing performance on PISA 2012 further sparked the national debate on quality and equity and the future of education in Sweden. This resulted in a broad consensus among educators and politicians on the need for change.

In response, the Swedish Ministry of Education and Research (MoER) invited the OECD to conduct this review on the quality of school education in Sweden, with a primary focus on compulsory education (primary and lower secondary). The review's objectives were to: 1) identify the main reasons for the decreasing trends in Swedish students' performance; 2) draw on lessons from PISA and other benchmarking countries/regions with an expert analysis of key aspects of education policy in Sweden; and 3) highlight areas of policy and its implementation which might add further value to Sweden's efforts to improve student performance.

Improving Schools in Sweden: An OECD Perspective, aims to help Sweden and other countries better understand the issues surrounding equity and quality of the school system and identify approaches for raising student performance. It draws on lessons from PISA, policy lessons from benchmarking education performers, research and analysis of key aspects of education policy in Sweden and a visit to Sweden by the OECD-Sweden review team (Annex A). The report makes extensive use of OECD's international knowledge base and of Swedish educational research, statistical information and policy documents. It identifies the main strengths and challenges of the school system and provides concrete recommendations and policy actions to serve as the foundation for a comprehensive school improvement reform to bring about system-wide change and strengthen the performance of all Swedish students.

The recommendations focus on: 1) creating the conditions for quality with equity across Swedish schools; 2) building capacity for teaching and learning through a long-term human resource strategy; and 3) strengthening steering of policy and accountability with a focus on improvement.

This report is part of OECD's increasing efforts to strengthen capacity for education reform across OECD member countries, partner countries and selected non-member countries and economies. OECD review methodology (Box 1.1) aims to support countries by providing effective policy advice, recommendations for improvement, and support in design and implementation.

Box 1.1. The OECD education policy review process

OECD Education Policy Reviews are tailored to the needs of the country and cover a wide range of topics and sub-sectors focused on education improvement. The reviews are based on in-depth analysis of strengths and weaknesses, using various available sources of data such as PISA and other internationally comparable statistics, research and a review visit to the country. They draw on policy lessons from benchmarking countries and economies, with expert analysis of the key aspects of education policy and practice examined.

Reviews include one or more review visits to the country by an OECD team of experts with specific expertise on the topic(s) being investigated, often including one or more international and/or local experts. A typical Education Policy Review consists of 5 phases, usually over 8 to 12 months depending on the scope of the review: 1) definition of scope; 2) desk review and preliminary visit to the country; 3) main review visit (generally one to two weeks); 4) drafting of the report; and 5) launch of the report.

The methodology aims to provide analysis and recommendations for effective policy design and implementation. It focuses on supporting reform efforts by tailoring comparative analysis and recommendations to the specific country context, engaging and developing the capacity of key stakeholders throughout the process.

Education Policy Reviews are conducted in OECD member countries and non-member countries, usually upon request by the countries.

For more information: www.oecd.org/edu/policyadvice.htm

The Swedish context

Sweden (officially the Kingdom of Sweden) is the third largest country in the European Union (EU)[1] in terms of land size. Bordered by Norway to the west and Finland to the east (Figure 1.1), it has a population of 9.7 million of which about a quarter (23%) is under 20 years of age. Sweden has a low density of population, with 23 inhabitants per square kilometre, but a large majority of the population is concentrated in urban areas. In fact, roughly 85% of Swedes live in cities (including suburbs) with about one-third in just three major towns – Stockholm, Göteborg, and Malmö (OECD, 2014b).

The population has increased by approximately 7% between 2005 and 2014. Sweden's fertility rate is 1.91 births per woman, higher than the OECD average of 1.70 but lower than the replacement level of 2.10 (OECD, 2014c). Sweden's population growth has been the result of immigration; its foreign-born population has been growing for several decades. Once demographically homogeneous, Sweden has become a more culturally diverse country since the late 1970s. In 2013 15% of the Swedish population were born abroad, putting Sweden among OECD countries with the largest foreign-born population. A further 5% of native-born Swedes had two foreign-born parents. Integration of immigrants and their children is therefore of key importance for the Swedish economy and society as a whole (OECD, 2014d).

Figure 1.1. Map of Sweden

Note: Bold lines represent county borders, shades of grey represent provinces.

Source: Wikipedia (2014), "Counties of Sweden", http://en.wikipedia.org/wiki/Counties_of_Sweden.

Sweden is a parliamentary representative democracy under a constitutional monarchy. The monarch of Sweden has mainly symbolic and ceremonial functions. Executive power is vested in the government, composed of the prime minister and cabinet ministers, and legislative power is vested in the parliament.

Although Sweden has largely been governed by the Social Democrats since the 1930s, either alone or in coalition, the centre-right Alliance for Sweden (a coalition of the Moderate Party, the People's Party Liberals, the Christian Democrats and the Centre Party) won the election in 2006 and again in 2010. In the 2014 elections, the Social Democrats once again became the largest party, resulting in the formation of a coalition left-centre government with the Green Party.

Public services are primarily delivered by local governments. Sweden consists of 20 counties (Figure 1.1), divided into 290 municipalities, each with an elected assembly or council. The Local Government Act of 1991 specifies numerous responsibilities at the municipal level, including delivery of services such as education (childcare, preschool, primary and secondary schools), health (e.g. support to disabled persons and elder care), urban planning, social welfare, emergency services (except policing), sanitation, and environmental issues. Municipalities are entitled to levy income taxes on individuals. As a result, municipalities have significant capacity to decide what services they should prioritise.

Sweden's Gross Domestic Product (GDP) is among the highest across OECD countries at USD 45 100 per capita, compared to the OECD average of USD 37 000 (OECD, 2015). When looking at the contribution to GDP by sector, agriculture contributes about 1.8%, industry 27.4%, with the services' sector accounting for the largest proportion, 70.8 % (Statistics Sweden, 2012). Sweden has a developed and diverse export-oriented economy aided by timber, hydropower and iron ore production. Traditionally a modernised agricultural economy that employed over half of the domestic workforce, today Sweden's economy is characterised by a large knowledge-intensive and export-oriented manufacturing sector with a comparatively small business-service sector and a large public-service sector. Large organisations dominate the Swedish economy, in both manufacturing and services (Ekonomifakta, 2013; OECD, 2015).

Sweden's economy has been resilient. While Sweden faced a severe recession in the early 1990s that led to a sharp decline in economic growth, throughout the 2000s it experienced strong productivity growth and gradually reversed the previous economic decline (McKinsey & Company, 2012). Although it was hit by the crisis in 2008, resulting in a real GDP decrease of -5% in 2009, Sweden quickly managed to return to growth, with rates of 6.6% in 2010 and 1% in 2012 (Figure 1.2). Specialisation in the most profitable parts of global-value chains has allowed Sweden to achieve one of the best productivity performances in the OECD over the past two decades, boosting living standards and well-being. The economy remains resilient in the current environment of slow global growth and uncertainty. Indeed, Sweden is among the few countries where output is now above its level before the 2009 global financial and economic crisis (OECD, 2015).

In addition to being one of the most competitive economies in the world (ranked the sixth most competitive country) (World Economic Forum, 2014), Sweden today is characterised by a high level of confidence in public institutions (65% of the population compared with the OECD average of 43%), a high degree of life satisfaction (the third highest among OECD countries, together with Iceland) (OECD, 2014c) and high living standards. It is the only country in the European Union, where GDP per capita in all regions is higher than the EU average (OECD, 2014b; OECD 2014e).

Figure 1.2. Unemployment rate and economic growth, 2005-13

Source: OECD (2014e), *Country statistical profile: Sweden 2014*, OECD Publishing, Paris, http://dx.doi.org/10.1787/20752288-table-swe.

Employment rates are also high. In 2013, they were the fifth highest across OECD countries (74% compared to the OECD average of 66%). The unemployment rate did increase following the 2008 economic crisis (Figure 1.2), but relatively less than that of several other OECD countries. Nonetheless, the Swedish old-age support ratio is one of the lowest among the OECD countries, with only three individuals of working age for every person aged 65 years or more, well below the OECD average of 4.2 workers (OECD, 2014b; OECD 2014e).

The difference in earnings between adults with a tertiary education and those with an upper secondary or post-secondary non-tertiary education is quite low compared with other OECD countries. Among 25-34 year-olds, the tertiary earnings premium is the second lowest across OECD countries, after Norway. Gender equity is another hallmark of the Swedish system. The difference in employment rates between men and women is less than three percentage points, ranking Sweden alongside Iceland, Norway and Portugal.

Immigrants, a growing group in Swedish society, face additional challenges on the labour market and their children often lag behind those of other Swedes in education (OECD, 2015). These outcomes have to be seen against the backdrop of a large proportion of migrants who have arrived for humanitarian reasons. Between 2003 and 2012, nearly 20% of permanent migrant inflows into Sweden were made up of humanitarian migrants – the largest share of all OECD countries. Such migrants have more difficulty integrating in all OECD countries (OECD, 2014d; OECD, 2015).

Sweden has a comprehensive welfare system. Its tax and transfer system reduces inequality considerably, although since the mid-1990s this equalising role has become less pronounced (ISF, 2014; OECD, 2014c). Those who are not in employment have seen their relative living standards eroded, as market-friendly reforms helped the economy grow but trimmed the social safety net (OECD, 2015). Still, the share of public social expenditures allocated to families and unemployment, and sickness and disability benefits to people in the working age population is greater than the OECD average. Public social spending accounted for 28% of GDP in 2012/13, above the OECD average of 22% (OECD, 2014c).

Some researchers have noted concerns about the relatively generous welfare state and how it may have shifted expectations and incentives. Lindbeck (2006) noted how Sweden is now more accepting of work and benefit dependency than in the past and referred to a "drift in attitudes and social norms" (Walker, 2007). Though it is beyond the scope of our review to examine this issue, his view resonates with findings of the review team that point towards attitudes of low expectations of students, high tolerance to disciplinary and truancy issues by schools and parents, and an apparent general feeling of complacency throughout large parts of the school system (see Chapter 2).

A clear strength is that lifelong learning is very well developed in Sweden, as in other Scandinavian countries, and it contributes to making the system inclusive. Some 66% of adults in Sweden participate in formal and non-formal education, including open or distance learning, private lessons and workshops – the largest proportion across OECD countries, along with Denmark and Finland. While 71% of employed adults participate in formal and/or non-formal education, 36% of inactive adults (those not looking for work) also participate, the largest proportion among all OECD countries. The willingness to take part in learning activities is also well developed among the adult population. One in three 25-64 year-olds in Sweden report wanting to participate in education, while one in four neither participate nor want to (OECD, 2014f).

This culture of lifelong-learning and the high skill levels of the Swedish workforce support high productivity growth and give the country a competitive edge in knowledge-intensive and high value-added parts of global value chains. High and increasing employment of both women and men contributes to raising standards of living, ensuring sustainability of public finances and keeping income inequalities relatively low. Nevertheless, a continuous decline in education results and difficult access to employment for the low-skilled and immigrants are putting this model at risk (OECD, 2015).

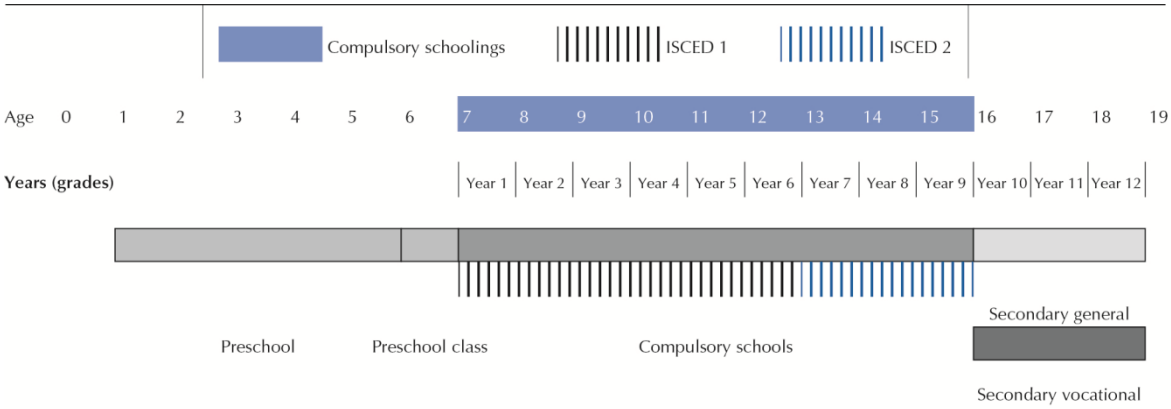
The Swedish school system

During the 2013/14 school year, there were about 921 000 students enrolled in the Swedish compulsory school system. Projections show this number is likely to increase to almost 1 million in 2018/19. In 2013/14, there were about 96 000 teachers working in 4 882 municipal schools, 5 Sami schools[2], 5 regional and 3 national special-needs schools, and 793 independent schools (fully publicly funded private schools).

Preschool for children under age 6 is considered the first stage of the educational system. With amendments to the Education Act in 2011, preschool became a school form of its own within the Swedish school system. All 3-5 year-olds are entitled to 525 hours of preschool education yearly free of charge, at least 3 hours a day or 15 hours a week.

The second stage starts at age 6, when children are offered access to preschool classes. Municipalities are obliged to provide a place for all 6-year-olds, also for a minimum of 525 hours per year. The aim of preschool classes is to stimulate learning and development of all children and to prepare them for compulsory school. These preschool classes are frequently integrated into compulsory schools. Just under 10% of students attend preschool classes with independent education providers, but the proportion differs markedly between municipalities. Twenty-three percent have another mother tongue than Swedish, and 39% of these received support in their mother tongue.

Figure 1.3. Overview of the education system up to the end of secondary education



Source: Adapted from Eurypedia (2014), "Sweden", European Encyclopaedia on National Education Systems, Eurypedia, https://webgate.ec.europa.eu/fpfis/mwikis/eurydice/index.php/Sweden:Overview.

Compulsory education is provided through a single structure that corresponds to primary and lower secondary education (ISCED levels 1 and 2). Children start Year 1 at age 7 and complete compulsory school at age 16 (Year 9). All children between age 7 and age 16 attend school, which is free of charge. There is no tracking: everyone follows the same path and the same curriculum from Year 1 to Year 9.

Total time in compulsory education is to be at least 6 785 hours over 9 years, with education providers responsible for deciding how the time for respective subjects is distributed over the years. The total time of instruction in Swedish schools is lower than most OECD countries with data available (OECD average of 7 475 hours instruction in compulsory education).

The compulsory school system includes Sami schools, special schools and schools for students with learning disabilities. Special schools are intended for children with hearing difficulties, serious language problems or impaired vision combined with other disabilities. The majority of students in need of special educational support are educated in general basic compulsory classes. If this is not possible, then the school must indicate very clearly why other educational options for students should be considered. This is an important philosophical standpoint for childcare organisation and operation. Earlier debates focused on prerequisites for mainstreaming. Now the focus has shifted to the need to justify segregated options considered for students (European Agency for Special Needs and Inclusive Education, 2013).

The main language of instruction is Swedish. In addition, there are state schools for the Sami population in the north of Sweden, with teaching in Swedish and Sami

(Eurypedia, 2014). There are also international schools that target children who temporarily reside in Sweden or who want to receive an education with an international dimension. These schools usually follow the curriculum of another country. Swedish children whose parents live abroad can be provided with nation-wide boarding school education.

Overall, the system is largely made up of public schools, although the number of independent (private) schools has been increasing since the early 1990s. The number of independent schools rose from 596 in 2005/06 to 790 in 2012/13. Among the 4 909 compulsory comprehensive schools in 2012/13, some 16% were independent schools (Statistics Sweden, 2014), including 43 independent schools for students with learning disabilities. The proportion of students in independent schools varies, with much larger proportions in large cities and suburban areas.

The size of Swedish schools varies greatly between rural and urban areas. In some rural parts of the country, there are few inhabitants, sometimes resulting in very small schools. One-third of public schools and more than half of independent schools have fewer than 100 students. As a result, some schools work with integrated age levels where children of different ages are taught in the same class. This can be a choice of pedagogical method or in order to keep a local school from closing.

Swedish upper secondary education aims to give basic knowledge for professional/vocational and community life, as well as for further studies. In the 2013/14 school year, 330 200 students were enrolled in upper secondary school, 6% less than the year before. The declining number of students, ongoing since 2009/10, is a result of demographic changes.

Upper secondary education is not compulsory in Sweden, but the majority of compulsory school students continue to upper secondary level. In 2013, upper secondary attainment among 25-64 year-olds was one of the highest among OECD and partner countries with available data (87.5%) (OECD, 2014f).

A new upper secondary education structure was introduced on 1 July 2011. The former 17 national programmes were replaced by 18 national programmes: 6 higher education preparatory programmes and 12 vocational programmes. The individual programme was replaced by five introductory programmes that cater to the learning needs of students who are not eligible for national programmes or who wish to meet the requirements for a specific higher education preparatory programme. The aim of these introductory programmes is to prepare students for future studies or the labour market. The target group and purpose differ between the five programmes.

All upper secondary programmes are based on courses for each subject and include the same eight compulsory courses in Swedish (or Swedish as a second language), English, history, civics, religion, mathematics, science, physical education and health, along with other subjects depending on the programme. General and vocational branches are provided within the same institutions (Eurypedia, 2014; MoER, 2015).

A considerable proportion of Swedes continue their studies at tertiary level in one of the 14 state universities and 17 state university colleges. More than four out of ten 25-34 year-olds had attained a tertiary education in 2013.

Swedish society has clearly embraced the value of lifelong learning. This is reflected in the fact that Swedish children begin their educational life at an early age. In 2012, 93% of 3-year-olds were enrolled in preschool, significantly above the OECD average of 70%,

and many continue beyond the age of 16. Partly as a result of this lifelong learning mentality, the Swedish adult population (age 16-65) shows an above-average level of proficiency in literacy, numeracy and problem solving in technology-rich environments, compared with adults in the other countries participating in the OECD Survey of Adult Skills. Compared to the overall population, young adults (age 16-24) in Sweden have higher proficiency in literacy and problem solving and slightly lower proficiency in numeracy. Compared to their peers in other participating countries, Sweden's young adults show above-average proficiency in numeracy but around-average proficiency in literacy (OECD, 2013b). The proportion of early school leavers in Sweden is relatively low (6.9% in 2014) compared to the EU 28 average (11.3%) and countries like Denmark (7.6%) and Finland (9.4%), and below the national 2020 target of less than 10% (Eurostat, 2015).

Learning goals and the curriculum

The general goals of compulsory schools are set out in the Education Act, which stipulates that education in the school system aims for students to acquire and develop knowledge and values, that it should promote the development and learning of all students and a lifelong desire to learn. The task of the school is to encourage all students to discover their own unique qualities as individuals, to be able to participate fully in society.

The curriculum for compulsory education, valid nationwide, went through a reform in 2011 (Box 1.2). It specifies that all schools should base their work on the same fundamental values and ensure that all students embrace these values. Local planning must seek to give practical expression to the goals and guidelines for education set out in the Education Act, the curriculum and syllabi. The overall goals are expressed as knowledge, skills and attitudes that the students are to master during compulsory school. The choice of tools and methods are not regulated. Within Sweden's decentralised steering of the school system, they are left to individual school organisers to determine.

National tests are compulsory at the end of the Years 3, 6, and 9 in Swedish, Swedish as a second language and mathematics. In 2010, these summative tests for Year 9 students were expanded to include science. National assessments for Year 3 and Year 6 in Swedish/Swedish as a second language, mathematics and English (Year 6 only) are intended for diagnostic and formative purposes.

Box 1.2. Curriculum for primary and lower secondary schools

Education in Sweden is steered by learning outcomes and goals defined at the central level. The Swedish Education Act of 2011 defines basic principles as well as a new overall curriculum for compulsory school, preschool class, and the leisure-time centre. This overall school curriculum is divided into three parts: 1) fundamental values and tasks of the school; 2) overall goals and guidelines for education; and 3) syllabi which are supplemented by knowledge requirements.

The curriculum is common from Years 1 to 9, but it differs among the four school forms: compulsory schools, compulsory schools for students with learning disabilities, special schools, and Sami schools. For compulsory schools, the Swedish Government determines the three parts of the overall school curriculum, except for the knowledge requirements which are defined by the National Agency for Education. For the three other school forms, the two first parts of the curriculum are also determined by the government, but the third part is drawn up by the National Agency for Education and/or the government depending on the school form.

In principal, the fundamental values and tasks of the school are the same for each of the four school forms. The school system should aim to develop knowledge and values of all students, promote the development of learning and a lifelong desire to learn, establish respect for human rights and the fundamental democratic values on which the Swedish society is based, and encourage respect for the intrinsic value of each person and the shared environment. The main tasks of the schools are to promote learning to prepare students to live and work in society, and also to develop students into creative, active, responsible, and competent and responsible individuals and citizens – for which partnership with the home is considered essential.

Goals and guidelines set out norms and values, as well as the knowledge that all students should have acquired by the time they leave compulsory school. The goals specify the orientation of work in the school. The school should actively and consciously influence and stimulate students into embracing the common values of Swedish society, and their expression in daily practice.

The syllabi state the general orientation and core content of each subject, and specify the goals for Years 3, 5 and 9. They also link core values of the curriculum with the content of subjects and knowledge to be acquired. Knowledge requirements determine acceptable knowledge and the different grades.

Subjects	Minimum number of teaching hours	Assessment
Art	230	End of Years 6 and 9
Crafts	330	End of Years 6 and 9
English	480	End of Years 6 and 9
Home and Consumer Studies	118	End of Years 6 and 9
Language options	320	End of Year 9
Mathematics	1 020	End of Years 3, 6 and 9
Music	230	End of Years 6 and 9
Physical Education and Health	500	End of Years 6 and 9
Swedish/Swedish as a second language	1 490	End of Years 3, 6 and 9
Geography, History, Religion, Social Studies	885	End of Years 3, 6 and 9
Biology, Chemistry, Technology, Physics	800	End of Years 3[1], 6 and 9

Note: 1. Except for Technology.

Source: Eurypedia (2014), "Sweden", European Encyclopaedia on National Education Systems, Eurypedia; National Agency for Education (2011); NAE (National Agency for Education) (*Skolverket*) (2011a), Curriculum for the compulsory school, preschool class and the recreation centre 2011, NAE, www.skolverket.se/om-skolverket/publikationer/visa-enskild-publikation?_xurl_=http%3A%2F%2Fwww5.skolverket.se%2Fwtpub%2Fws%2Fskolbok%2Fwpubext%2Ftrycksak%2FBlob%2Fpdf2687.pdf%3Fk%3D2687.

Student assessments in compulsory school are also conducted through end-of-term reports at the conclusion of autumn and spring terms in Years 6, 7, 8 and at the conclusion of the autumn term in Year 9. Each student is evaluated and graded against the knowledge requirement. It is not just knowledge students acquire though education in school which is observed. According to the curricula, when setting grades, teachers take into account all accessible information about the student's proficiency in relation to national knowledge requirements, and make an all-round assessment of the proficiency the student shows (MoER, 2015).

Since 2012, a new grading scale is in place that consists of six grade levels: from A to F, with F being the only non-pass result. This system replaces the previous three grade levels (G – pass; VG – Pass with distinction; MVG – Pass with special distinction), which was considered to offer teachers too few options in assigning grades. In addition, grading has become compulsory from Year 6 onwards (approximately age 12). Up to Year 5, students do not receive grades: students automatically move to the next level each Year, unless parents/guardians and/or the school principal request otherwise. At the end of compulsory schooling (Year 9), a school-leaving certificate is issued which lists a student's final grades in subjects, groups of subjects and optional courses.

In 2011, admission requirements to enter upper-secondary school were also tightened. Previously, to be eligible for upper-secondary school, Year 9 students required only a Pass in three subjects (mathematics, English and Swedish or Swedish as a second language). Under the new regime, students who choose a vocational programme now need to achieve a Pass grade in five additional five subjects (eight in total). Admission to higher education preparatory programmes requires a Pass grade in an additional nine subjects (twelve in total).

Governance and financing

Until 1990, the Swedish education system was largely centralised, and seen as a component of the social democratic welfare state. The 1990s were marked by a series of reforms that changed the education landscape in Sweden. Responsibility for the provision of primary, secondary and adult education was devolved to municipalities. At the same time, changes were made to encourage the creation of independent schools. Parents and students could choose which school to attend, depending on availability of places, and municipalities had to ensure that any student in their catchment area could attend one of the public schools in the municipality. A central notion behind decentralisation reforms in the early 1990s was that resource allocation would become more effective and resources would be directed to where they were most needed (NAE, 2009). The new devolved system was based on an outcome-driven approach, shifting the responsibilities of many of the key education governance institutions in Sweden.

On behalf of the government, the main responsibility of the Ministry of Education and Research (MoER) is to set national educational goals and evaluate the results of the system. Decisions on how to achieve those goals are left to municipal and school level. The MoER is supported by three agencies:

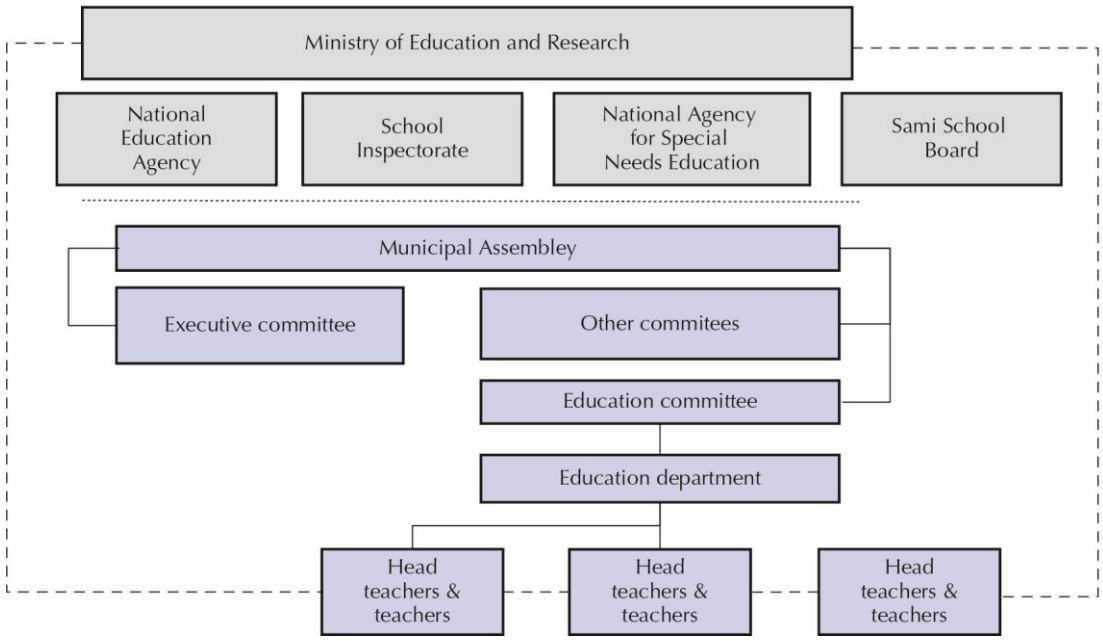
- The National Agency for Education (NAE, 1991): Its original remit, following the decentralisation reforms, was to disseminate knowledge and information, rather than exercise active control. It did not examine individual public schools (*Statskontoret*, 2005). Throughout the years, the role of the NAE has evolved, and current responsibilities include proposing national goals in the curricula, which then are implemented by the municipalities. It also manages collection, analysis

and dissemination of quantitative data regarding the school system. The NAE is also responsible for national follow-up and evaluation. Furthermore, the NAE develops support material, such as general advice and guidelines regarding interpretation and implementation of steering documents.

- The Swedish Schools Inspectorate (2008): It conducts regular supervision of all municipal schools, from preschool to adult education. Nine regional units undertake school visits throughout the country. Its activity focuses on providing qualitative feedback to schools, based mainly on site visits and on-the-spot observations but also on the specific school-related quantitative data provided by the NAE.
- The National Agency of Special Needs Education (1996): It co-ordinates the government's efforts regarding students with special educational needs (Blanchenay, Burns and Koester, 2014; Eurypedia, 2014; MoER, 2015).

In addition there is the Sami School Board (1981) which is the administrative agency for public Sami schools and their affiliated activities. The Sami School Board also promotes and develops Sami education in the public school system for children and youth, and promotes the development and production of teaching material for Sami education.

Figure 1.4. Governance of the Swedish public school system



Source: Blanchenay, P., T. Burns and F. Koester (2014), "Shifting Responsibilities: 20 years of Education Devolution in Sweden: A Governing Complex Education Systems Case Study", *OECD Education Working Paper*, No. 104, OECD Publishing, Paris, http://dx.doi.org/10.1787/5jz2jg1rqrd7-en.

There is no county-level governance in the Swedish education system. The Education Act determines that municipalities and independent school providers are the responsible authorities for schools, in charge of implementing educational activities, organising and

operating school services, allocating resources and ensuring that national goals for education are met.

Every municipality is governed by an elected body, the Municipal Assembly (Local Government Act). The municipal assembly appoints an executive committee and any additional committees required to undertake the tasks of the municipality, including an education committee to govern its public education system. Principals report to the education committee, while their tasks are governed by the central government through the Education Act and the goals set out in curricula and syllabi (Blanchenay, Burns and Koester, 2014). Principals and teachers can fulfil these goals based on their own interpretation and adopt practices taking individual students' needs into consideration. Reforms in the 1990s also intended that students increasingly take responsibility for their own learning progress (NAE, 2009; Carlgren, 2009).

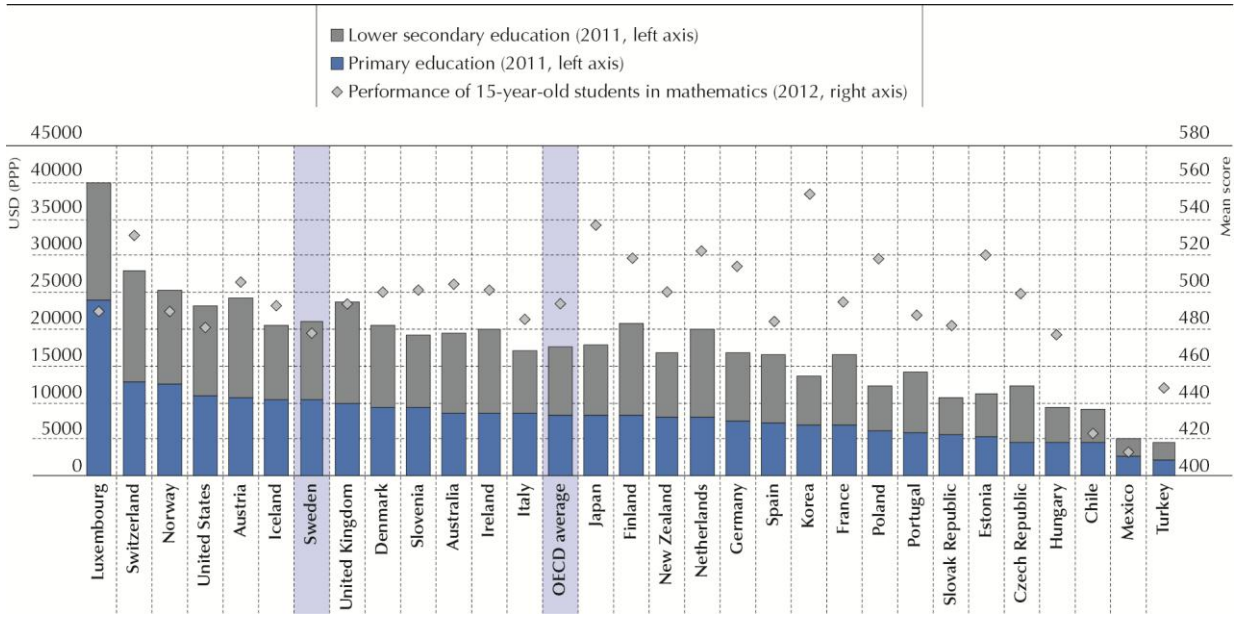
Schooling at the compulsory level is free of change, and both municipal and grant-aided independent schools are funded through municipal grants from students' home municipalities and through state grants (Eurypedia, 2014). The funding system is based on what may be called a school voucher, which follows students to the schools where they are enrolled. Vouchers differ from one student to another and between different types of schools, as there are differences between municipalities in cost levels and thus also in budgeting of costs per student (MoER, 2015).

School funding is shared between the state and municipalities. State funds are paid to municipalities through what is called the general state grant. In addition, there are government grants for particular purposes that normally are paid for a limited period and under their own regulatory frameworks. Each of the 290 municipalities then allocates resources to individual schools. Preschool education is financed partly in the same way, but it is not fully free of charge, as preschools are allowed to charge fees to cover part of their costs. The amount of these fees is regulated, with the maximum fee determined by the central government. Municipalities may receive revenue from municipal taxes to finance municipal activities. A special arrangement is made for Sami schools and special schools, which are financed directly by the state.

As in other Nordic countries, public expenditure on education as a percentage of GDP in Sweden is high compared to other OECD countries (6.8% compared to an OECD average of 5.6%). Between 2008 and 2011, spending per student increased slightly at primary, secondary and post-secondary non-tertiary levels of education, in line with the OECD average, as the result of a decrease in the number of students and stable expenditure levels. This increase is mainly supported by public spending, which represents a large majority of spending on educational institutions (OECD, 2014f).

It is also worth stressing that over the period 2008-11, Sweden prioritised education as a key public sector. Public expenditure on education in Sweden grew faster than public expenditure on all services, as was the case in about half of all OECD countries, while the share of public expenditure on education decreased in the other OECD countries. In 2011, Sweden's education budget amounted to 13.2% of total public expenditure, just above the OECD average of 12.9% (OECD, 2014f). However high expenditure doesn't always translate into better performance (Figure 1.5). While Sweden's expenditure per student is higher than that of countries such as Korea and Poland, 15-year-olds in those countries still outperform their Swedish peers significantly. How resources are allocated is just as important as the amount of resources available for allocation (Grubb, 2009; OECD, 2014g).

Figure 1.5. Expenditure per student in primary and lower secondary education (2011) and mathematics performance on PISA 2012



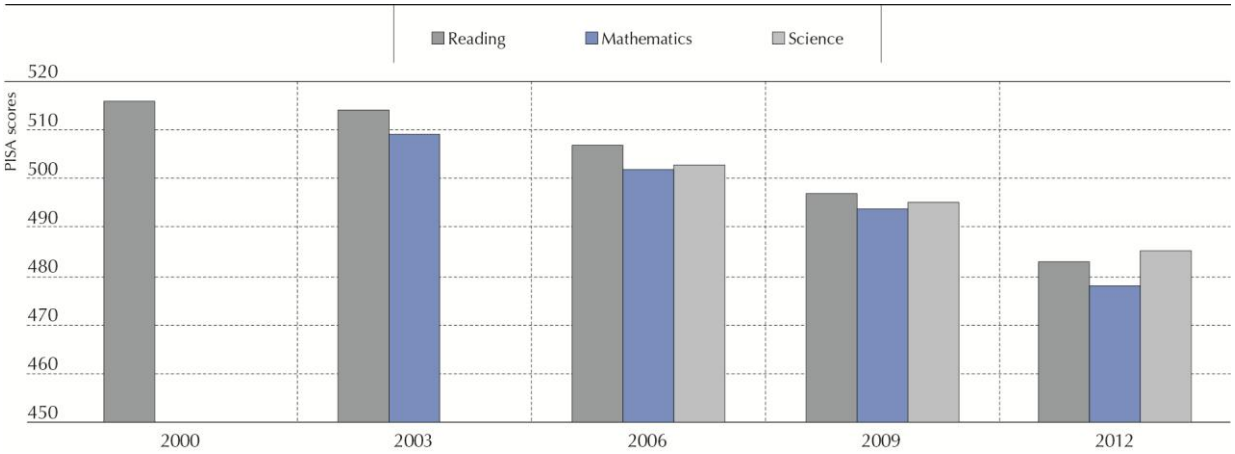
Sources: OECD (2014f), *Education at a Glance 2014: OECD Indicators*, OECD Publishing. http://dx.doi.org/10.1787/eag-2014-en; OECD (2014a), *PISA 2012 Results: What Students Know and Can Do (Volume I, Revised edition, February 2014): Student Performance in Mathematics, Reading and Science*, PISA, OECD Publishing. http://dx.doi.org/10.1787/9789264201118-en.

Low student performance, though not in all domains

Sweden's performance on PISA, frequently the subject of political and public debate in recent years, has served as a catalyst for reform. In the most recent PISA assessment, in 2012, Sweden ranked 28 among the 34 OECD countries in mathematics, 27 in reading and 27 in science.[3] Sweden performed significantly below all other Nordic countries in mathematics and significantly below Denmark, Finland and Norway (but not significantly differently from Iceland) in reading and science. In problem solving, Sweden performed significantly below Finland and Norway, but not significantly different from Denmark (Iceland did not participate in the assessment of problem solving).

PISA trend data shows that Sweden has declined from a position around or above the OECD average in 2000 to a position significantly below the average. No other country participating in PISA experienced a steeper decline over the past decade than Sweden. In comparison, the average performance in mathematics across all OECD countries remained roughly stable between 2003 and 2012.

Figure 1.6. Sweden's performance on PISA, 2000-12



Source: OECD (2014a), *PISA 2012 Results: What Students Know and Can Do (Volume I, Revised edition, February 2014): Student Performance in Mathematics, Reading and Science*, PISA, OECD Publishing, Paris, http://dx.doi.org/10.1787/9789264208780-en; OECD (2010), *PISA 2009 Results: What Students Know and Can Do (Volume I): Student Performance in Reading, Mathematics and Science*, PISA, OECD Publishing, Paris, http://dx.doi.org/10.1787/9789264091450-en; OECD (2007), *PISA 2006: Science Competencies for Tomorrow's World: Volume 1: Analysis*, PISA, OECD Publishing, Paris, http://dx.doi.org/10.1787/9789264040014-en.

The drop in the Swedish average in mathematics performance is partly due to an increase in the number of students who perform poorly. The share of 15-year-old students in Sweden who do not reach the baseline level of mathematics proficiency increased from 17% to 27% between 2003 and 2012, above the OECD average of 23%. Although some countries have seen similar increases, no other OECD country has seen a larger increase in the share of low-performing students than Sweden.

The share of low-performing students also increased in reading and science, from below the OECD average to above the average. In reading, the share of low performers increased from 13% in 2000 to 23% in 2012, compared with the OECD average of 18% in 2012. Similarly, in science, the share of low-performers increased from 16% in 2006 to 22% in 2012, compared with the OECD average of 18% in 2012.

At the other end of the spectrum, the share of top-performing students (defined as reaching Level 5 or 6 in the PISA scale) decreased significantly in all three PISA domains (literacy, numeracy and science). The decrease was largest in mathematics, where the share of top-performers roughly halved over the last decade, from 16% in 2003 to 8% in 2012, bringing it well below the 2012 OECD average of 13%. The share of top-performing students also declined in reading, though to a lesser extent, from 11% in 2000, above the OECD average, to 8% in 2012, not significantly different from the OECD average. In science, the share of top-performers was around 8% in 2006 and 2009, close to the OECD average, while in 2012 it decreased slightly to 6%, significantly below the OECD average.

The negative trend on PISA among Swedish 15-year-olds is reflected in other international assessments. For example, Sweden's participation in the Trends in International Mathematics and Science Study (TIMMS) showed that, between 1995 to 2011, mathematics performance of Swedish Year 8 students (14-15 year-olds) declined by 55 points. This is the largest decline among the OECD-EU countries that participated in TIMSS. Fifteen OECD-EU countries have a higher mathematics performance than

Sweden and four have a lower performance in the latest TIMMS study (2011). The trend for science has been similar: no other EU or OECD country has seen a steeper decline in science among Year 8 students than Sweden. The largest decreases, in both mathematics and science, were found between 1995 and 2003, and the decline continued in the 2000s, although at a slower pace (NAE, 2012b).

Table 1.1. Sweden's performance on international assessments

	4th grade (around age 11)		8th-9th grade (around age 15)	
Reading	PIRLS 2011 Above average	TRENDS PIRLS 2001-2011 ↓	PISA 2012: Below average	TRENDS PISA 2000-2012 ↓
Mathematics/ numeracy	TIMSS 2011: Below average	TRENDS TIMSS 2007-2011 ↔	PISA 2012: Below average TIMSS 2011: Below average	TRENDS PISA 2003-2012: ↓ TIMSS 1995-2011 ↓
Science	TIMSS 2011: Above average	TRENDS TIMSS 2007-2011 ↑	PISA 2012: Below average TIMSS 2011: Below average	TRENDS PISA 2006-2012: ↓ TIMSS 1996-2011: ↓
Problem solving			PISA: Below average	
Civics and citizenship			ICCS 2009: Above average	
English as a foreign language			ESLC 2011: Above average	

Sources: European Commission (2012), *First European Survey on Language Competences*, http://ec.europa.eu/languages/policy/strategic-framework/documents/language-survey-final-report_en.pdf; Mullis, I.V.S. et al. (2012), *TIMSS and PIRLS 2011, Relations among reading, mathematics and science achievement at the fourth grade – implications for early learning*, TIMSS & PIRLS International Study Center, Boston College, Chestnut Hill, MA; OECD (2014a), *PISA 2012 Results: What Students Know and Can Do (Volume I, Revised edition, February 2014): Student Performance in Mathematics, Reading and Science*, PISA, OECD Publishing, Paris, http://dx.doi.org/10.1787/9789264201118-en; Schulz, W. et al., (2010), *ICCS 2009 International Report: Civic knowledge, attitudes, and engagement among lower-secondary school students in 38 countries*, IEA (International Association for the Evaluation of Educational Achievement), Amsterdam.

TIMSS also measures Year 4 students (age 10-11), but trend data for this age group is only available for a four-year period from 2007 to 2011. In mathematics, Sweden's performance remained stable over this period, at a level slightly below the OECD-EU average. In science, however, performance increased from around the OECD-EU average to above the average (NAE, 2008; NAE, 2012b).

The Programme in International Reading and Literacy Study (PIRLS), which measures reading comprehension among students in the same age group (Year 4, age 10-11), showed that, over the ten-year period from 2001 to 2011, Swedish results declined from the highest among all participating countries to just above the average among participating EU and OECD countries. The biggest relative decline in Swedish results occurred between 2001 and 2006 (NAE, 2003; NAE, 2012a).

While trends in the Swedish results are mostly negative, some international assessments show positive performance in selected domains. For example, Swedish students performed above international averages in assessments of civic knowledge and English as a foreign language. In the 2009 International Civic and Citizenship Study (ICCS), Swedish Year 8 students (age 14-15) performed in the international top five among the 38 participating countries in terms of civic knowledge. Sweden was outperformed only by Chinese Taipei, Denmark, Finland and Korea. Civic knowledge refers to knowledge and understanding of how civic societies and systems work, as well as civic principles, participation and identities (Schulz et al., 2010).

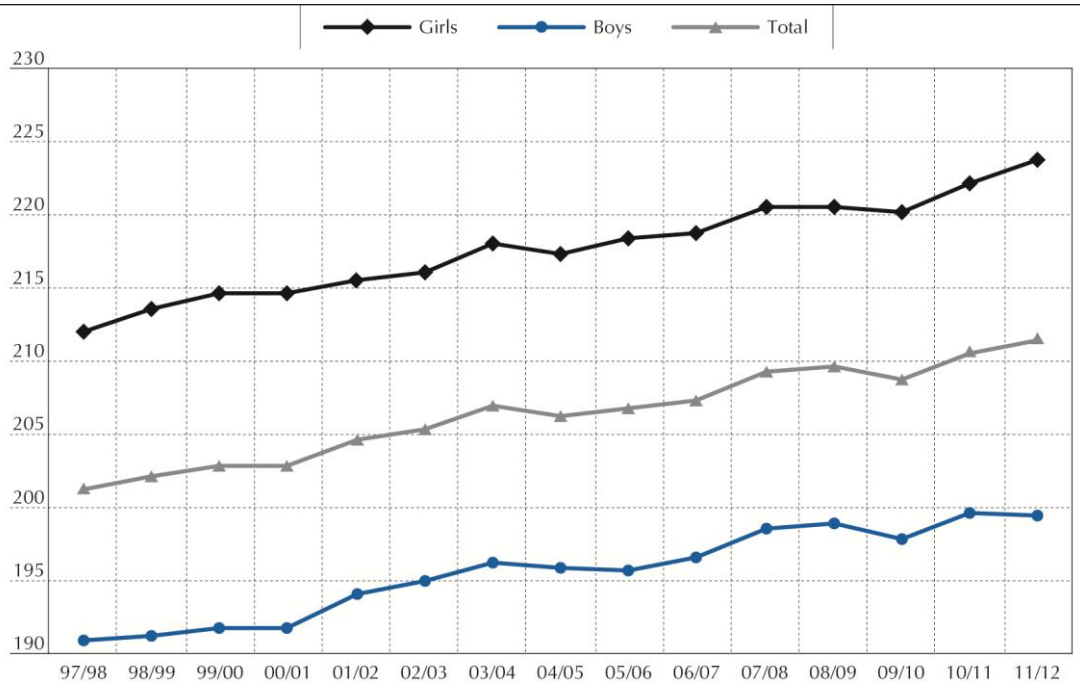
Swedish students also show high achievement levels in English as a foreign language, as measured by the European Commission's European Survey on Language Competencies (ESLC). In the 2011 survey, Swedish Year 9 students (around age 15) had the best results in reading and listening among the 15 European education systems that participated. Swedish students were also among the top performers in terms of writing (European Commission, 2012). Sweden was the only Nordic country to take part in the ESLC study.

Despite the strong performance of Swedish students in civics and citizenship and English as a foreign language, recognised as key competences for lifelong learning in the 21st century, Swedish students are underperforming on other key competences like communication in their mother tongue (Swedish) and competence in mathematics and science. In comparison with other Nordic and OECD countries, Swedish students are among the low performing in most subjects assessed in international surveys.

However, some national data show a different picture. For example, when looking at students' grades at the end of Year 9, the data show a gradual increase since 1998. Grades are based on the goals students are expected to achieve at the end of Year 9 (according to the curricula), using the established grading criteria. Students' merit ratings are calculated before selection to upper-secondary school. The rating is the total of grade points in the 16 best subjects in the student's final grades (under the old grading scale, Pass equalled 10 credits, Pass with Distinction equalled 15 credits and Pass with Special Distinction equalled 20 credits).[4] The maximum possible rating is 320 credits. Average merit rating has steadily increased between 1998 and 2012 (Figure 1.7). In the 2009/10 school year, the merit rating declined to an average of 208.8, but it has increased continuously since then (NAE, 2013).

A 2011 report by the OECD on evaluation and assessment arrangements in the Swedish school system noted shortcomings in Swedish student achievement data and questioned its reliability and usability for system-level monitoring (Nusche et al., 2011). The system relies on grades and tests results awarded by the students' teachers, and selected research evidence has pointed towards inequities in teacher grading. The new curriculum (Box 1.2), with clearer and more concrete goals for student learning, and the revised grading scale, which allows for clearer differentiating of student performance, are important steps forward. However, as evidence suggests, the variable assessment capacity of Swedish teachers continues to challenge the reliability of grades and the results of national assessments.

Figure 1.7. Average merit rating in Year 9, 1997/98 - 2011/12



Source: NAE (2014), *Facts and figures 2012: Pre-school activities, schools and adult education in Sweden, summary of report 2013*, NAE, Stockholm, www.skolverket.se/om-skolverket/publikationer/visa-enskild-publikation?_xurl_=http%3A%2F%2Fwww5.skolverket.se%2Fwtpub%2Fws%2Fskolbok%2Fwpubext%2Ftrycksak%2FBlob%2Fpdf3184.pdf%3Fk%3D3184.

Swedish schools are equitable, but not always conducive to student learning

The Swedish national school system is based on democratic foundations and on the philosophy that all students have the same right to personal development and learning experiences. These principles provided the foundation for development of the comprehensive school system, which came into being in 1962, together with the first modern curriculum. Nowadays, all children between the ages of 7 and 16 attend school free of charge and there is no tracking; everyone follows the same route and the same curriculum from Year 1 to Year 9.

The political goal of reducing inequality of educational attainment is generally accepted in Sweden and supported by the Swedish welfare state model, focused on the provision of equality of opportunity. At the same time, it is recognised that higher educational attainment of populations and support for educational progress of individuals from lower socio-economic background contribute to economic growth and social cohesion (Le Grand, Szulkin and Tahlin, 2005; OECD, 2012).

Sweden has a relatively equitable school system. PISA 2012 shows that the socio-economic background of 15-year-olds is not closely associated with their mathematics performance (measured as the strength of the relationship between the PISA index of economic, social and cultural status and mathematics performance) and is below the OECD average. Sweden has a level of equity close to that of the other Nordic countries, most of which are more socially equitable than the average across OECD countries (with the exception of Denmark which has a level of equity similar to the OECD average) (Figure 1.8).

Figure 1.8. Student performance and equity, PISA 2012

Source: OECD (2013c), *PISA 2012 Results: Excellence through Equity (Volume II): Giving Every Student the Change to Succeed*, PISA, OECD Publishing, Paris, http://dx.doi.org/10.1787/9789264201132-en.

PISA data also shows that the decline in Sweden's average results cannot be ascribed to a decline in performance among a particular group of students. Student performance in Sweden declined over the past decade among socio-economically disadvantaged and advantaged students alike. Average mathematics performance among the quarter of students with the lowest socio-economic status deteriorated from 468 to 443 score points between 2003 and 2012, while performance among the quarter of students from the most

advantaged backgrounds deteriorated from 557 to 518 score points over the same period. PISA trend data between 2003 and 2012 suggests that there has in fact been some progress in terms of equity within the school system (OECD, 2013c).

In addition, PISA 2012 shows that the average performance of schools does not vary as much as in many other countries, but there are large differences in student performance within each school. Like other Nordic countries, Sweden has relatively small variations in performance between schools. In Sweden, the between-school variation is 12% compared to the OECD average of 37%. The only other OECD countries where between-school differences account for less than 15% of the OECD average total variation are Denmark, Estonia, Finland, Iceland and Norway.

However, performance variation between schools in Sweden has increased between 2003 and 2012, from 9% to 12%. While differences between schools increased, differences within each school became smaller as within-school variance decreased from 92% to 85% of the OECD average total variation over the same period. The total variation in student performance across all students in Sweden – within schools and between schools – is close to the OECD average and has remained so over the last decade (OECD, 2013c).

In the same way, the decline in student performance cannot be explained by the denomination of schools (i.e. public or independent schools), immigrant status or gender of students. To start with the latter, average performance declined among students of both genders, although more so for boys. For example when looking at reading in all OECD countries, girls consistently outperform boys. In Sweden, the gender gap used to be of the same magnitude as the average across OECD countries. But with a larger decline in performance among boys than among girls between 2000 and 2012, the gender gap in Sweden is now above the OECD average.

Today, Swedish girls have an average score of 509 points in reading (8 points below the OECD average for girls), while boys have an average score of 458 points (21 points below the OECD average for boys). National data confirms the gender gap in student performance. For example, of the students who finished Year 9 in spring 2012, 7.6% failed to achieve a Pass grade in one subject, 14.1 % in two or more subjects and 0.9 % failed to achieve a Pass in any subject. A higher proportion of boys (25.8 %) than girls (19.3 %) failed to achieve their goals in any subject (NAE, 2014).

In addition, from 2003 to 2012, the share of immigrant students in Sweden increased from 12% to 15%, a larger share of immigrant students than in most other OECD countries and the largest share among the Nordic countries. The rising share of immigrant students has led to growing diversity in classrooms and schools, though not always in the same way. Immigrants in Sweden are mostly concentrated in the urban areas of Svealand and Götaland, and particularly in the three major cities of Stockholm, Gothenburg and Malmö.

The increase in the share of immigrant students had only a small impact on the overall results for Sweden and cannot explain the significant decline in Sweden's overall results. Both immigrant and non-immigrant students in Sweden saw a sharp decline in performance over the past decade, and the results did not deteriorate more significantly for one group than for the other. Between 2003 and 2012, mathematics performance of immigrant students declined by 21 points; among non-immigrant students it declined by 27 points.

Nevertheless, the performance gap between immigrant and non-immigrant students remains a challenge for the Swedish school system. Almost one in two immigrant students in Sweden (48%) performs below the baseline level in mathematics, compared with 22% of non-immigrant students. In particular, a high proportion (59.2%) of first generation immigrants did not achieve the baseline in mathematics, compared to the OECD average for first generation immigrant students (40.2%). Part of the challenge lies in responding to the learning needs of newly arrived students who are often unfamiliar with the Swedish language. There have been many in recent years: the number of asylum-seeking students in the 2013/14 school year was 4 900, some 750 more than in the previous school year.

Sweden has a relatively well-developed policy infrastructure and a policy tradition of equity, which lay good foundations for policy action for migrant education. Sweden has long acknowledged the importance of acquiring the language of the host country and has a long history of providing language support. It also supports – with a legal framework – immigrant children to maintain their mother tongue and culture (OECD, 2010). Almost 23% of all students in compulsory education have the right to mother-tongue tuition, but only 54% of them, mainly girls, actually participate in these additional classes.

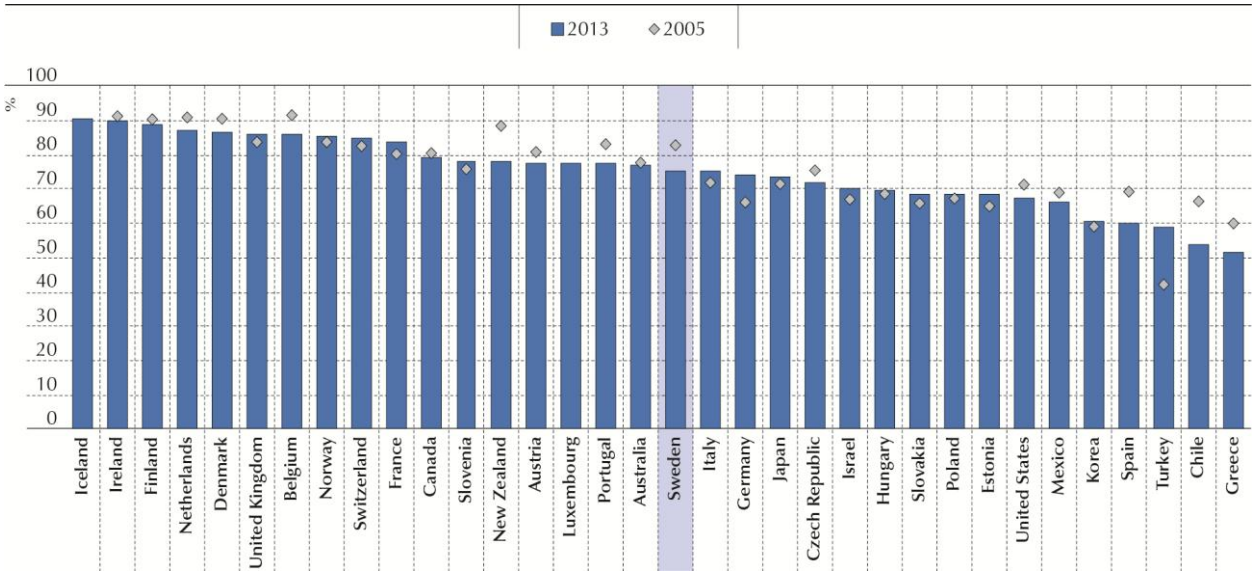
Learning environments need to be conducive to student learning

Swedish students appear to be motivated to learn mathematics, according to PISA, which distinguishes two forms of motivation. Students may learn because they enjoy it and find it interesting (intrinsic motivation) and/or because they see learning as useful to future studies and career (instrumental motivation).

PISA also shows that most Swedish students are positive about their school education and feel it is useful, but at the same time it is important to note that students' positive attitudes towards school deteriorated considerably between 2003 and 2012, from a level around the OECD average to below the average. For example, the proportion of Swedish students who find that school has not been useful increased from 7% in 2003 to 15% in 2012, compared with the OECD average of 11% in 2012.

Students' attitudes towards school can be influenced by their parents, their teachers, their peers and the atmosphere at school and within society at large. Data from the Gallup survey shows a negative trend in public confidence and trust in the Swedish education system. In 2013, 76% of Swedish people expressed confidence in the education system, significantly lower than in 2005 (Figure 1.9). However, this is still higher than in most OECD countries, perhaps not what one would expect considering the widely reported sharp decline in the performance of Swedish students on PISA and various other international assessments and studies.

Figure 1.9. Public confidence in education system, 2005, 2013.



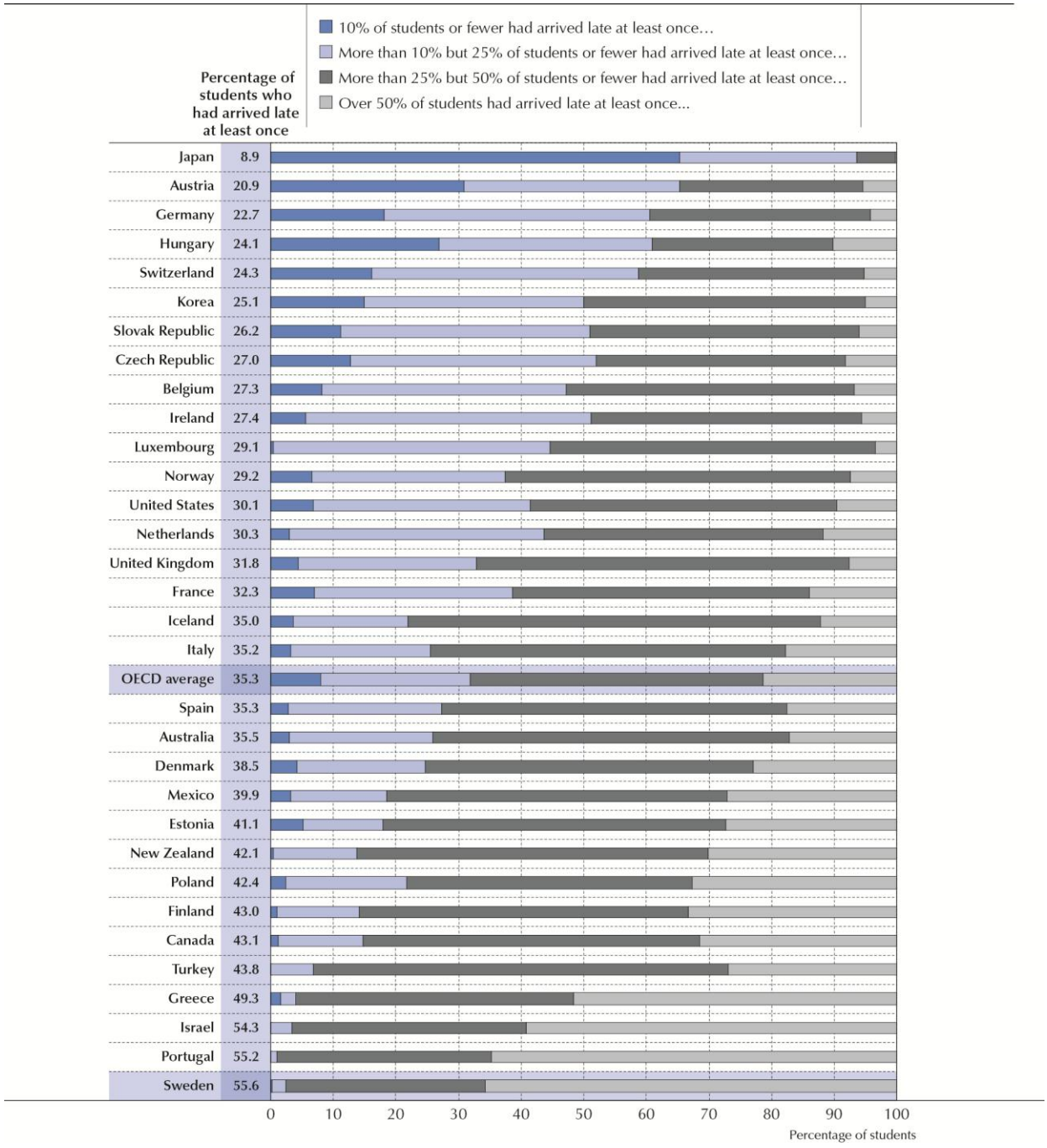
Notes: Data for Germany and the United Kingdom are from 2011. Missing data for some countries for 2005.

Source: Gallup World Poll, 2013, in L Cerna,. (2014), "Trust: What it is and Why it Matters for Governance and Education", *OECD Education Working Papers*, No. 108, OECD Publishing, http://dx.doi.org/10.1787/5jxswcg0t6wl-en.

Positive school climates, understood by the quality of teacher-student relations and the general atmosphere, can contribute to success in learning (OECD, 2013d). PISA 2012 reported more disciplinary issues for Swedish students than for their peers across OECD countries.

- Sweden had the highest proportion of students who arrived late for school among OECD countries; more than one in two 15-year-olds reported that they had arrived late for school at least once in the two weeks prior to the PISA test (Figure 1.10), and this likelihood was higher among immigrant students than non-immigrant students.
- Although Swedish students are only slightly more likely to skip classes than on average across OECD countries (20% had skipped classes in the two weeks prior to the PISA test), students from socio-economically disadvantaged backgrounds (the most disadvantaged quarter of students) are significantly more likely to skip classes (26%) than disadvantaged students in other countries (19%).
- 34% of Swedish students reported that the teacher had to wait a long time for students to quiet down, compared to 28% of students on average across OECD countries.
- 38% of Swedish students reported that there was noise and disorder during lessons, compared to the OECD average of 32%. Such disturbances or distractions during lessons equate to less time for quality teaching and learning. In Sweden, as in most other countries, schools whose student population is predominantly disadvantaged tend to have a more negative disciplinary climate.

Figure 1.10. Percentage of students arriving late at school, PISA 2012



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

From an economic perspective, the relatively small difference in earnings between adults with a tertiary education and those with an upper secondary or post-secondary non-tertiary education and the safety net provided by the welfare state may not provide sufficient incentive for learning and working hard. The evidence also suggests that importance placed on equality in Swedish society may have had the unintended effect of

not challenging all students sufficiently. Parents would seem to play a role in this by over-protecting and nurturing them too much and insufficiently challenging them as they grow up.

The evidence would seem to suggest this hypothesis. In PISA 2012, for example, students reported relatively low levels of perseverance when it concerns their learning, with 60% of students easily giving up when confronted with a problem, considerably higher than the OECD average of 44%. PISA shows that perseverance is strongly correlated with student performance, and even more so in Sweden than in most other countries. This and other evidence leads to the conclusion that Swedish students are not always putting in the necessary effort (NAE, 2013). The relatively low perseverance and students' frequent belief that their underperformance is caused by something other than their own lack of effort (NAE, 2014) support this conclusion.

Teachers' beliefs as to how students learn best may play a part in this. In Sweden, at least 8 out of 10 lower secondary teachers think that it is their role to facilitate inquiry in the student, that students should be allowed to think of solutions to practical problems themselves before the teacher shows them how they are solved, and that thinking and reasoning processes are more important than specific curriculum content. However, only 45% of Swedish lower secondary teachers think that students learn best by finding solutions to problems on their own; considerably less than the average (83%) across countries that participated in the OECD Teaching and Learning International Survey (TALIS) (OECD, 2014h).

Parental expectations may also play their role. Sweden did not administer the parental questionnaire for PISA 2012. But for those countries that did, PISA shows that parents' expectations are strongly and positively associated not only with student performance but also with positive dispositions towards learning. Students whose parents have high expectations for them – who expect them to earn a university degree and work in a professional or managerial capacity later on – tend to have more perseverance, greater intrinsic motivation to learn, and more confidence in their own abilities than students of similar socio-economic status and academic performance, but whose parents have less ambitious expectations for them. PISA shows that perseverance is strongly correlated with performance within countries, more so in Sweden than in most other countries. This may suggest that Swedish parents' expectations of their children may not be sufficiently high.

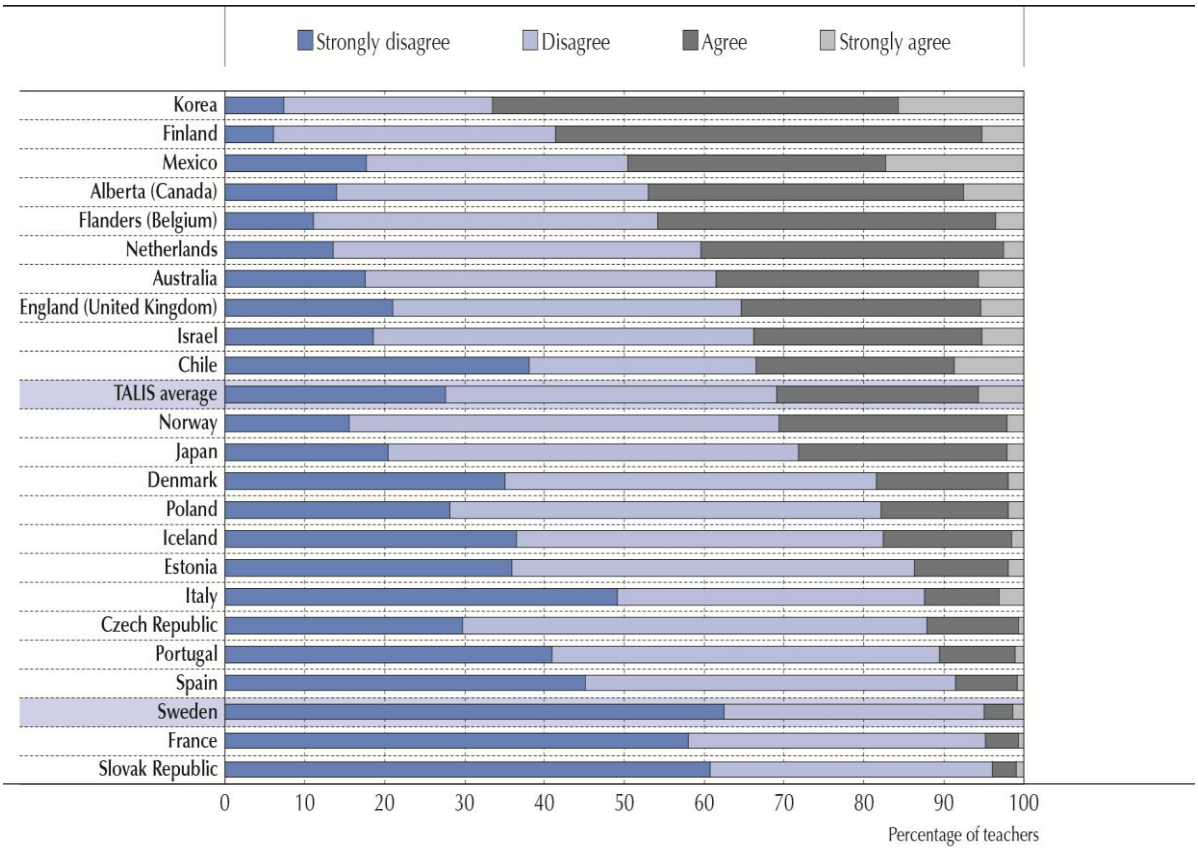
The high proportions of students with truancy issues and arriving late for classes may support such a hypothesis, as does anecdotal evidence gathered during our interviews with various key stakeholders, including parents, students, teachers, school leaders and policy makers. Though schools have an important role to play in this matter, it is also an important issue for Swedish parents to take responsibility for. Research evidence clearly shows that without the positive co-operation of family and schools, it is unlikely that all students will reach the high expectations in terms of educational outcomes set by a demanding society (Avvisati et al., 2013; Castro et al., 2015; OECD, 2012; Shute, 2011). The importance of this joint responsibility of the school, parents/guardians for students' schooling is also reflected in the Swedish school curriculum.

In sum, although Swedish schools are inclusive and can be characterised by relatively good student-teacher relationships, many face major challenges in terms of their disciplinary climate. Evidence points to the conclusion that many Swedish schools and their larger learning environments are not always conducive to learning and are insufficiently challenging students to reach their highest potential.

A motivated workforce, despite underdeveloped conditions for excellence in the profession

Many of the highest performing education systems share a commitment to professionalised teaching in ways that imply that teachers are accorded the same status as other highly-regarded professions (Schleicher, 2011). Existing research on teacher human capital indicates that in high-performing school systems, such as in Canada and Finland, teachers enjoy high status in society and have sufficient levels of pay (OECD, 2014g). OECD evidence clearly shows that one of the most powerful success factors in education is attracting, retaining and developing quality teachers. Swedish teachers, however, do not see their profession as highly valued in society. TALIS 2013, for example, showed the extremely low perception among lower secondary teachers of the value that society accords to the teaching profession (OECD, 2014h) (Figure 1.11).

Figure 1.11. Teachers' view of how society values the teaching profession, TALIS 2013



Source: OECD (2014h), *TALIS 2013 Results: An International Perspective on Teaching and Learning*, TALIS, OECD Publishing, http://dx.doi.org/10.1787/9789264196261-en.

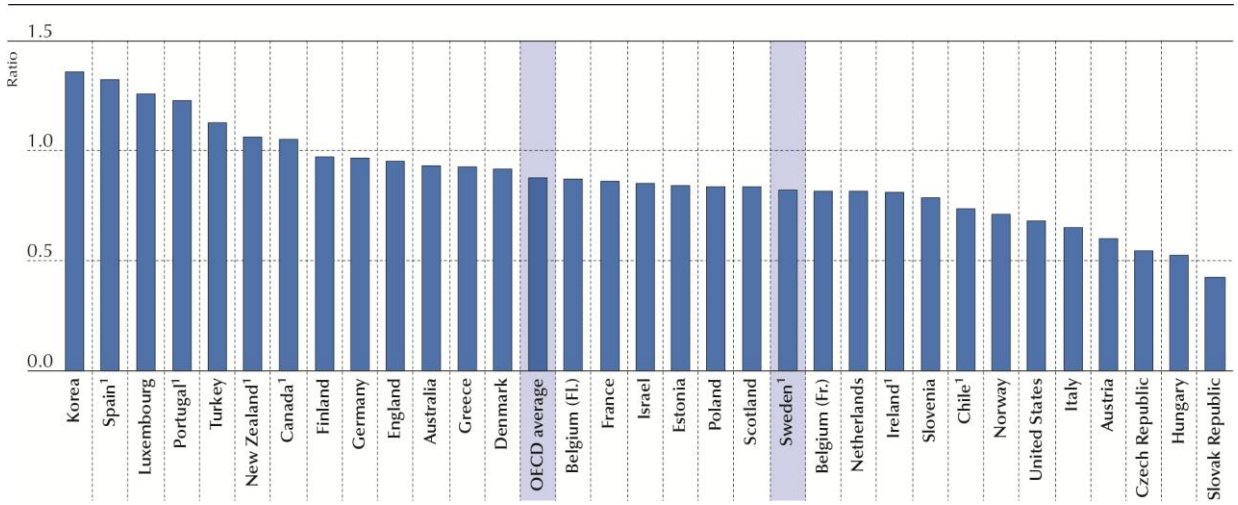
While this is not only a matter of salary, a well-designed remuneration system does matter, as it sends a clear signal of the status of the teaching profession within society. In Sweden, since 1995, pay is negotiated between principals and teachers. The government leaves decisions about individual teachers' salaries to be negotiated annually by the principal and the teacher. This has contributed to the situation in which starting salaries for Swedish teachers with minimum training are slightly above the OECD average at all

levels of education. However, after 10 years, 15 years and at the top of the scale, salaries fall behind the OECD average. The national level of teachers' salaries relative to earnings for full-time, full-year workers with tertiary education is also slightly below the OECD average: 82% for primary education, compared with the OECD average of 85% and 82% for lower secondary education, compared with the OECD average of 88% (OECD, 2014h) (Figure 1.12).

Though a flat salary structure is common to many professions in Swedish society, different surveys also show a negative real wage development for teachers during the last decades (Persson and Skult, 2014). Teachers' relative wages have been unfavourable in relation to certain other professional groups, which may have made it more difficult to recruit candidates to the teaching profession (MoER, 2015).

Figure 1.12. Teachers' salaries relative to earning for tertiary-educated workers age 25-64 (2012)

Lower secondary teacher's salaries, in public institutions



Source: OECD (2014f), *Education at a Glance 2014: OECD Indicators*, OECD Publishing, Paris, http://dx.doi.org/10.1787/eag-2014-en.

Swedish lower secondary teachers report working a total of 42 hours per week, 4 hours more than on average across TALIS countries. The amount of time devoted to teaching however is lower than in other countries, and considerably more time is devoted to general administrative work (OECD, 2014h). Though teachers spend about as much time teaching as they did 15 years ago, since then a number of tasks have been added, such as documentation, administration, contacts with parents, concerns for students' health and psycho-social environment (MoER, 2015). The heavy administrative and reporting workload of teachers was consistently mentioned as a challenge during the OECD review team's various interviews with key stakeholders.

These and other conditions may not be sufficiently attractive and competitive with other relatively well-remunerated professions and may have contributed to the aging of Sweden's teacher workforce. In 2012, the proportion of young teachers (under 30) was only 7%, while ten years earlier the proportion was 11%. Even though the share of teachers over 50 decreased from 44% in 2002 to 39% in 2012, 15% of teachers at secondary level in Sweden were over 60 in 2012, the second-highest share among OECD countries (along with Norway and New Zealand) and well above the OECD average of

8% (OECD, 2014f). Current projections point towards significant challenges in terms of the mismatch between the supply and demand of new teachers. This is shown through, among other factors, the relatively low numbers of applicants to initial teacher education programmes (which are, however, rising), the large anticipated numbers of teachers retiring, as well as a proportion of teachers who are considering changing career.

In addition, despite opportunities for school organisers to provide higher salaries to better performing teachers and/or respond to shortages in teachers for certain subjects by offering higher salaries, in 2012 Swedish principals reported considerable shortages in qualified teachers, for example in mathematics (14%) and in science (20%). Principals also reported a particularly wide gap between advantaged and disadvantaged schools in the shortage of qualified teachers (0.76 index points) with disadvantaged schools having more difficulty finding qualified teachers for certain subjects (OECD, 2013d). As also shown in previous investigations, teachers are teaching without having a degree oriented towards teaching in existing school forms, school years or subjects (MoER, 2015).

Also, almost one in five lower secondary teachers (18%) in Sweden regret their decision to become a teacher, compared to 10% across TALIS countries. Only 53% would still choose to work as a teacher if they could decide again, compared with 78% across TALIS countries (OECD, 2014h).

In sum, high retirement rates are expected for the near future, Swedish teachers are less satisfied with their choice of occupation than on average in other OECD countries, more and more teachers think about changing their profession, students with good grades do not choose education in pedagogical professions, and long-term forecasts predict a shortage of teachers and principals.

Still, teachers' sense of self-efficacy and job satisfaction is high. For example, a vast majority of teachers in Sweden report overall satisfaction with their job (85%) and report being satisfied with their performance in their current school (96%). Yet, various sources of evidence suggest that some teachers may be too positive about their performance and that the quality of teachers is variable throughout the Swedish school system. For example, it is difficult to match the high sense of self-efficacy of teachers with the low performance of Swedish students in the various international assessments.

Teachers have long been left to interpret the curriculum and syllabi on their own and, in general, have received little support from education providers. In the past, there are also reports of many teachers who have taught subjects in which they are not qualified, and a considerable proportion of teachers do not have any teacher training. PISA 2012 showed that 76.5% of teachers had a university level degree (at ISCED 5A level), leaving almost a quarter without the required qualification. And teachers themselves point towards particular areas where they feel they need further training, such as knowledge of the curriculum, student evaluation and assessment practices and use of information and communication technologies (ICT) (OECD, 2014h).

Recognising the importance of ensuring a high-quality teacher workforce, various reforms have been initiated in Sweden in recent years that relate to initial training and professional development of teachers, and interest in teacher education programmes is starting to increase (MoER, 2015). The first reform was is a review of initial teacher education in 2011. Now there are 4 university-level professional initial teacher education programmes provided by 28 universities and university colleges: 1) preschool education; 2) primary school education with three specialisations; 3) subject education with two specialisations; and 4) vocational education (Box 1.3).

Box 1.3. Teacher education in Sweden

In Bill 2009/10:89, Top of the class – new teacher education programmes, passed by the Riksdag in April 2010, the government proposed that the degree of Bachelor/Master of Education be replaced by four new professional degrees: in preschool education, in primary school education, in subject education and in vocational education. These new education programmes started in the autumn of 2011.

1. Degree in preschool education

In the course of this programme, prospective preschool teachers will acquire the knowledge and skills required to meet the learning and care needs of the youngest children, and have very solid knowledge of how reading, writing and basic mathematical skills are acquired.

2. Degree in primary school education, with three specialisations

Degree in primary school education directed at work in preschool class and Years 1-3 of compulsory school

This programme gives the teacher a broad range of knowledge and equips her/him to follow students' development and teach most subjects. Knowledge about the development of reading and writing skills and in-depth knowledge of mathematics for younger children should be an essential part of their skills.

Degree in primary school education directed at work in Years 4-6 of compulsory school

The requirements concerning both a broad orientation and in-depth subject studies are considerably higher, and students will acquire a well-defined identity as a teacher oriented towards teaching in Years 4-6. Apart from knowledge of Swedish, mathematics and English, the subject studies should allow for choice, with students choosing between social subjects, natural science subjects and technology, or one or more practical or artistic subjects.

Degree in primary school education directed at work in out-of-school care

The degree in primary school education directed at work in out-of-school care comprises 180 higher education credits. The focus of the programme should primarily include knowledge in the field of out-of-school teaching and one or more practical or artistic subjects.

3. Degree in subject education, with two specialisations

Degree in subject education directed at work in Years 7-9 of compulsory school

This specialisation will provide teachers with the skills to teach three subjects. The programme provides a limited number of subject combinations so as to suit the needs of the school system and to increase teachers' employability.

Degree in subject education directed at work in upper secondary school

This specialisation provides teachers with the skills to teach in two subjects. The programme provides a number of subject combinations so as to suit the needs of the school system and to increase teachers' employability.

4. Degree in vocational education

To be accepted in the programme, basic eligibility for higher education studies is required as well as advanced and relevant vocational knowledge. It is possible to provide programmes with great flexibility in terms of time and location as well, as to enable those with vocational skills to study to become a vocational teacher.

Source: Eurypedia (2012), https://webgate.ec.europa.eu/fpfis/mwikis/eurydice/index.php/Sweden:Teachers_and_Education_Staff.

Furthermore, in 2011 a system for registering teachers came into force. Teacher who are not registered cannot teach, mark or get a post with conditional tenure. The National Agency for Education is responsible for registering teachers and judging their qualifications.

In addition, no matter how good initial teacher education is, it cannot be expected to prepare teachers for all the challenges they face during the first weeks and months of employment as a teacher. Effective induction and mentoring programmes can help new

teachers deal with these challenges and avoid some of the problems that may emerge (European Commission, 2010; OECD, 2014h). Participation in such induction and mentoring programmes is not common in Sweden. Swedish lower secondary teachers reported a lack of support mechanisms for new teachers, with very low participation in induction and mentoring programmes in 2013. Not surprisingly, newer teachers show much lower confidence in their own abilities (OECD, 2014h).

Responsibility for the continuous professional development of teachers is divided between the government and municipalities. Though not a legal requirement, Swedish teachers are currently entitled to 104 hours per year for continuous professional development during regular working time. The National Agency for Education must ensure that in-service training courses are available in all parts of the country, while school organisers are obliged to ensure that all school staff are adequately trained. For professionally active teachers, universities and colleges arrange in-service training courses of varying length which are market determined. Contract education for this purpose can be purchased from various providers: universities, university colleges and regional development centres that are part of the teacher education system are the primary organisers of competence development funded with public money. Other organisers are educational broadcasting, teachers' trade unions, other state authorities and independent educational companies.

In addition, several state-supported educational programmes for teachers have been initiated to enhance their skills in specific areas (e.g. Mathematics Boost and Counselling for Learning) (MoER, 2015). The government has also invested about SEK 300 million in a pilot project in 2014/15 that aims to enhance teachers' professional development in the area of reading and writing. The training is planned to continue at full scale during the 2015/16 to 2017/18 school years (Eurypedia, 2014).

Research shows that professional development needs to be in accordance with appraisal and feedback practices (OECD, 2005; Schleicher, 2011; Schleicher 2014). However, in Sweden, almost one-third lower of secondary teachers receive no feedback at all. Those that do get feedback typically get it from the school principal and report him/her to be poorly equipped for this task.

A lack of career paths has for many years hindered the professional development of Swedish teachers. In recent years however, two career posts were added to the career structure: First Teachers and Senior Subject Teachers. Since 2013, teachers who stand out as excellent in their practice can be appointed First Teacher, a position that has additional responsibilities and a higher salary. Teachers who have a licentiate degree (an intermediate degree between a Master and a PhD), and have shown that they are well-qualified and suitable teachers over a minimum period of four years, can be appointed Senior Subject Teacher or Lecturer. Through government grants, the monthly salary can be increased by approximately 5 000 SEK for First Teachers and 10 000 SEK for Senior Subject Teachers (European Commission, 2013; MoER, 2015). This is considered a step forward in the professionalisation of teachers. Still further efforts will be needed to make the teaching profession into an attractive and highly regarded profession within Swedish society.

Moving from administrative leadership to pedagogical leadership

As countries are seeking to adapt their education systems to the needs of contemporary society, expectations for schools and school leaders are changing. With greater autonomy for schools in designing curricula and managing resources, the role of

the school leader has grown far beyond that of administrator. Developing school leaders requires clearly defining their responsibilities, providing access to appropriate professional development throughout their careers, and acknowledging their pivotal role in improving school and student performance (Schleicher, 2012).

Evidence shows, however, that in many OECD countries there is much room for improvement to professionalise school leadership, to support current school leaders and to make school leadership an attractive career for future candidates (Pont, Nusche and Moorman, 2008), and this includes Sweden.

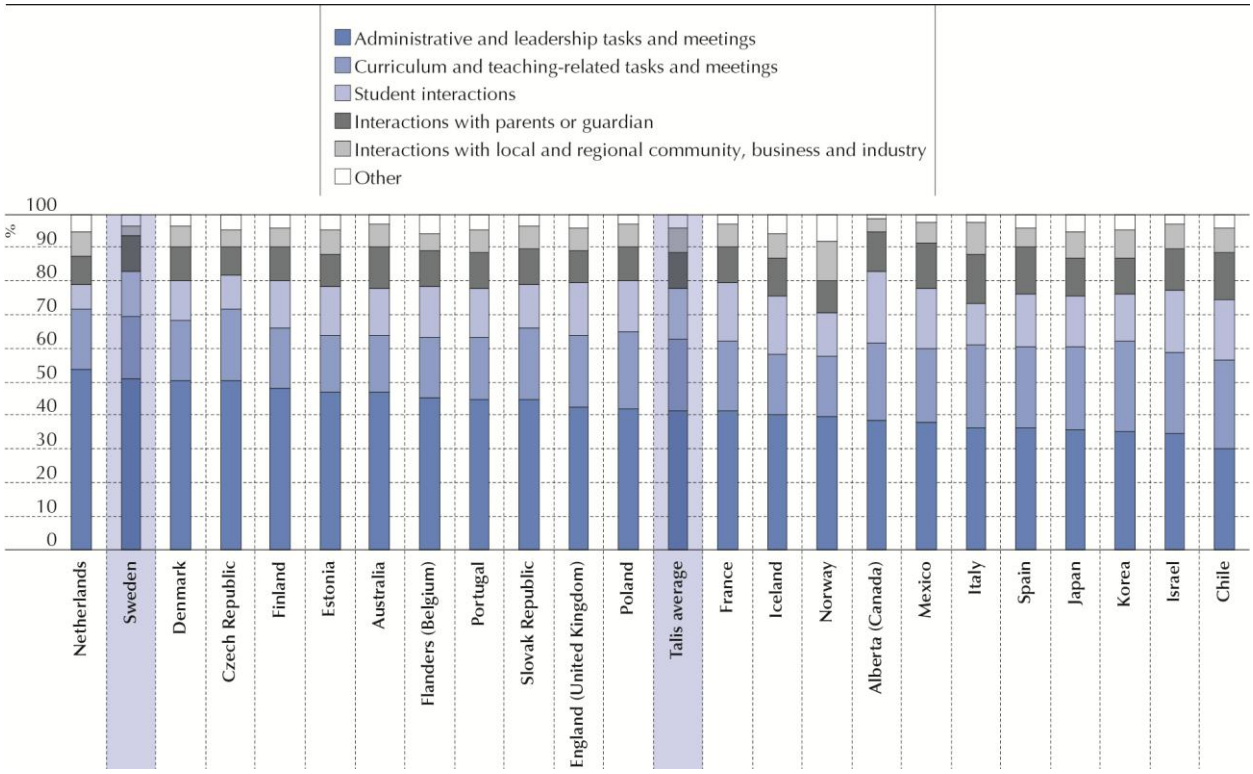
In 2012/13, Sweden had approximately 8 000 principals and deputy school heads in service in the compulsory school system. In municipal schools, the principal is a civil servant employed by the municipal school administration, a pedagogical leader and manager of the teachers and other staff in the school. The principal has overall responsibility for the school's internal organisation and activity which is aimed at reaching national goals and knowledge requirements expressed in the curricula and syllabi, as well as ensuring the quality of the teaching provided. The principal's role includes responsibility for financial management, personnel management, work organisation, environment, educational development and quality improvement (MoER, 2015)

In practice, administrative and leadership tasks form a major part of the daily work of Swedish principals. TALIS 2013 showed that Swedish principals devote more than half their time (51%) on administrative and leadership tasks and meetings (Figure 1.13), more time than their peers in almost all other TALIS countries (OECD, 2014h). This prioritisation is also reflected by the focus on leadership or managerial qualifications in the recruitment process (ETUCE, 2012). According to the Education Act, every school in Sweden shall have a principal who has a good knowledge of rules and regulations valid for Swedish schools. Although experience in a leadership position, and teaching qualifications and experience are considered essential, there are no national or regional regulations stipulating the minimum years of professional experience in leadership or teaching before appointment (ETUCE, 2012).

TALIS 2013 also showed that principals spent close to one-fifth of their time on instruction and teaching-related tasks and meetings, slightly below the TALIS average. For example, on the question whether the principal has taken action to ensure that teachers take responsibility for improving their teaching skills, only 44% indicated that they "often" or "very often" engaged in this type of activity during the 12 months prior to the survey, compared to a TALIS average of 69% (OECD, 2014h). The Swedish Schools Inspectorate (2012) also noted that in practice educational leadership is not always prioritised. Most policy makers, education practitioners and other stakeholders would seem to agree that this is an area of principals' work that needs further attention, if the school system is to move forward.

Figure 1.13. Principals' working time, TALIS 2013

Average proportion of time lower secondary education principals report spending on the following activities



Source: OECD (2014h), *TALIS 2013 Results: An International Perspective on Teaching and Learning*, *TALIS*, OECD Publishing, Paris, http://dx.doi.org/10.1787/9789264196261-en.

Various sources have pointed to the challenging workload of principals which, among other things, limits their ability to prioritise pedagogical leadership, causes stress and an unhealthy work-life-balance (Swedish Schools Inspectorate, 2012; ETUCE, 2012; MoER, 2015). The norm for working hours of school leaders appears to be around 50 hours weekly, even though the normal work week is up to 40 hours. These working hours are among the highest when compared to other public service occupations in Sweden (ETUCE, 2012).

Swedish principals' salaries are also not particularly high, when compared both nationally and internationally. As with teachers and unlike in many other countries where statutory salaries are determined at central or regional level, Swedish principals negotiate their salaries on an individual basis with their employer, whether they work in a public or an independent school. In 2013, the average salary for a principal was approximately 40 000 SEK per month, the lowest among the Nordic countries (European Commission, 2013; MoER, 2015). Also, many other tertiary educated professionals in Sweden, such as doctors and top lawyers earn considerably more (about 10 000 SEK more per month). The differences in salary are also great between schools and across the country. In addition, there is no career structure for principals, which makes changing workplace or moving into municipal administration the only ways to increase the salary.

Several measures have been taken in recent years to strengthen leadership capacity in Swedish schools. The principal's responsibility and authority has been clarified through

the Education Act in 2011. It was made clear, among other things, that it is the principal (and not the employer) who decides on the school's internal organisation, has responsibility for work with quality in the form of planning, follow-up and development of the activity, and is directly responsible for students' development towards the goals.

Recently a chair inquiry has been appointed to examine the working situation of principals with the aim of creating school-level conditions for improving student results. Proposals for strengthening principals' responsibility and authority and their pedagogical leadership are to be presented in spring 2015 (MoER, 2015).

With the revised Education Act, it also became obligatory for all newly employed principals to attend the advanced academic-level School Leadership Programme or an equivalent. Newly appointed principals are expected to start their education as soon as they are appointed and complete it within a four year period. Of the approximately 8 000 principals and deputy school heads in Sweden, approximately 60%, have either attended the School Leadership Programme or are currently enrolled (NAE, 2013).

Various other short and longer continuous professional development opportunities have been made available to school leaders in recent years by the NAE, municipalities and independent schools to meet the growing and changing demands of the profession. It appears that lack of co-ordination and collaboration among these key stakeholders led has to some overlap in efforts. Still, as a result of these efforts nine out ten principals (91%) reported on TALIS 2013 that they had participated in a school administration or principal training programme (compared with 85% across TALIS countries), and a similar proportion (93%) indicated that they had participated in a teacher training programme or course (slightly above the TALIS average of 91%) (OECD, 2014h).

However, concerning the participation in continuous professional development of principals in general, the data suggests that Swedish principals are devoting less time than their peers in other countries on professional development activities. The proportion of principals who report participating in courses, conferences or observation visits during the 12 months prior to the survey is higher in Sweden (94%) than on average across TALIS countries (83%). But Swedish principals spent, on average, 8 days on these activities, compared with 13 days for their peers across TALIS countries.

Some 42% of principals in Sweden report taking part in a professional network, mentoring or research activity during the preceding 12 months, less than the average across TALIS countries (51%). But principals in Sweden spent only 7 days on such activities (OECD, 2014h), while the average for principals across TALIS countries is 20 days.

The evidence suggests there is good reason for these measures. Apart from the heavy workload, stress and unhealthy life-and-work balance that many Swedish principals face on a daily basis, there are other concerns. The Swedish Schools Inspectorate pointed towards significant shortcomings in quality management processes of schools and education providers. In the Schools Inspectorate's school visits during 2010, a total of 62% of compulsory schools were assessed to have deficiencies when it came to principals' responsibility for school results being regularly evaluated with the aim of improving the work of the school (Swedish Schools Inspectorate, 2011). Two years later (2012), half of all supervised schools received criticism from the Schools Inspectorate for deficiencies in quality management processes. In most cases, this was related to the principal not following up and analysing school results and using them to define measures

aimed at improving school and student performance (Swedish Schools Inspectorate, 2013).

A challenge for school leadership in many countries, in systemic terms, is not only to distribute and develop leadership across space, but also to develop and articulate it over time (Hargreaves et al., 2007). Highly effective schools are often characterised by high leadership stability (James et al., 2006). Several OECD countries are however facing an aging teacher and school leader workforce; this includes Sweden where the need for attracting and retaining quality principals is an issue. Though there is no data collected at the national level about school leaders, national estimates suggest that one in four principals is to retire in coming years (i.e. are age 60 years or older) (MoER, 2015). TALIS 2013 shows that 13% of principals are 60 or older and that 38% are between 50 and 59 (OECD, 2014h). Still even the lower estimate suggests a risk of considerable shortages in the years to come.

However, the situation is complex, partly due to limited national data and information covering education administration arrangements at different levels (for example employment status and initiatives to develop the capacities of education administrators). This hinders long-term planning of the leadership capacity for Swedish schools, as the turnover of principals is reported to be high. Some of the main reasons cited for principals leaving the profession are heavy workloads and the lack of trusting relationships between principals and municipalities, often stemming from unclear relationships in terms of the division of roles and responsibilities (MoER, 2015).

In all, it appears that the building of leadership capacity at the school level and the conditions for such leadership to thrive, in particular pedagogical leadership, have received relatively little policy attention in recent years. Efforts by the various stakeholders involved (including the Ministry, National Agency of Education, the Swedish Association of Local Authorities and Regions, trade unions, municipalities and independent schools) are largely uncoordinated, although successful implementation of policies and programmes very much depend on the efforts of principals and other school leaders (e.g. deputy heads) to set the direction, and take responsibility for putting learning at the centre and keeping it there (OECD, 2013e).

High local autonomy, but weak and unclear accountability measures

Until the 1990s Sweden was known to have one of the most centralised education systems in Europe (OECD, 1998). At the time, the education system was seen as a key component of the social democratic welfare state. Increasingly however, there was a push towards more local freedom and responsibility and many argued that the centralised education system had become inefficient and too expensive (Lundahl, 2002). As a result, a number of far reaching reforms were initiated in the 1990s that changed the educational landscape for good.

A major step in 1990 was the devolution to municipalities of responsibility for primary, secondary and adult education. This reform gave municipalities the "full financial responsibility for the schools offering such education" (Björkland et al., 2004). Municipalities also received powers for all decisions regarding schooling, including curriculum choice (as long as they met national requirements), school location, and hiring, including for principals. Teachers remained in the employment of municipalities and their wages continued to be negotiated at the central level until 1996. In that same

year, responsibility for negotiations and setting working conditions (hours and time spent on tasks) were also devolved to municipalities.

At the same time, school funding changed greatly. Before 1990, the central government controlled the resources allocated to each school and the purpose they would serve. After the reform, transfers from the central government were transformed into lump-sum grants to municipalities that were earmarked for education. The proportion of central transfers earmarked for schooling was quickly reduced, and by 1993 all central transfers became part of a general grant to municipalities. This meant greater financial responsibility for municipalities, who had complete control over allocation of their resources between schooling and other municipal duties such as social services, waste collection, public health, etc. It also meant less direct oversight and control of spending from the central government (Blanchenay, Burns and Koester, 2014).

In the same period, two other major reforms were initiated that brought further responsibilities to municipalities and added to the complexity of local school systems. The first reform was the liberalisation of rules for establishing and running independent schools. Independent schools are fully funded by public funds and have full autonomy to allocate resources as long as they confirm to government regulations. The second reform was the introduction of school choice for students and parents that began to take shape in education policy on a large scale in 1991 (Sahlgren, 2010). Due to these reforms, the system has gone from one where students with few exceptions attended the public school in their catchment area, to one where many students opt for a school than their default school, and where privately run but publically funded alternatives exist alongside traditional public schools (Edmark, Fröhlich and Wondratschek, 2014).

The impact of these two reforms on student performance is the subject of much debate in Sweden and internationally. Those favouring reforms aimed at offering parents greater choice to select schools for their children believe that competition creates incentives for schools to raise the quality of education. Critics argue that school choice leads to more social segregation. Though PISA shows that the inequity among Swedish schools has increased during the last decade (OECD, 2013c), it is however important to note that the data do not allow drawing of causal conclusions.

Returning to the early 1990s, the speed of these reforms gave municipalities little time to prepare and adjust to their new responsibilities. The *laissez-faire* approach to implementation of these reforms was deliberate, with the National Agency for Education staying at arm's length to give municipalities the space to allow them to proactively anticipate their new responsibilities. This sudden shift of many responsibilities from the central government to municipalities without the necessary support for capacity building, or human and financial resources meant that many municipalities in the early stages of the reform were insufficiently prepared in terms of organisation, leadership and know-how.

Soon it became clear that government structures were not flourishing equally, with many municipalities struggling to take on their new responsibilities. As early as 1993, the National Agency for Education established that there were problems in the municipal governance of schools and commented that it was "of the utmost importance that the focus laid down by the Swedish Parliament with regard to governance and responsibility for schools be clarified and respected" (NAE, 1993). From then onwards, the National Agency for Education started providing greater support and guidance to help municipal politicians and administrators better understand and manage their new educational responsibilities.

Table 1.2. Selected overview of Swedish education reforms

Date	Reform
1991	Education responsibilities are formally shifted to municipalities. Earmarked funds for schooling are allocated to municipalities based on the number of enrolled students. Creation of independent schools is facilitated. National Agency for Education (*Skolverket*) is created to monitor creation of independent schools.
1992	Parents and students can choose which school to attend. Independent schools receive public funding from municipalities based on the number of students enrolled.
1993	Transfers from the central government are no longer earmarked for schooling and are subsumed into general grants to municipalities.
1994	New curriculum gives more autonomy to schools in the choice of content and freedom in teaching.
1996	Wages are now negotiated at the municipal level.
1997/98	Mandatory test in Year 9 in Swedish/Swedish as a second language, mathematics and English.
2003	National Agency for Education (NAE) is reformed to focus on monitoring and data dissemination.
2003-2008	National Agency for School Improvement.
2008	Creation of the Swedish Schools Inspectorate, assuming former NAE responsibilities for school inspections. NAE inherits the task of School Improvement.
2009	Mandatory national tests in Year 5 in Swedish/Swedish as a second language, mathematics and English.
2010	Mandatory national test for Year 9 in science. Mandatory national test in Year 3 in Swedish/Swedish as a second language and mathematics.
2011	New Education Act harmonises regulations on public and independent schools. New curriculum introduced. Mandatory national tests in Year 5 in Swedish/Swedish as a second language, mathematics and English replaced by testing in Year 6.
2012	New grading scale is introduced, and grading starts in Year 6. Induction period for new teachers initiated; registration of all teachers required.
2013	Career development reform: creation of First Teacher and Senior Subject Teacher positions. Reduced documentation requirements in schools: Individualised Development Plans abolished in Years 6-9 and reduced to once per school year in Years 1-5. Children without citizenship get the right to education.
2014	Resource allocation based on students' different abilities and needs. Reduced documentation requirements regarding action programmes for students at risk.

Source: Blanchenay, P., T. Burns and F. Köster (2014), "Shifting Responsibilities - 20 years of Education Devolution in Sweden: A Governing Complex Education Systems Case Study", *OECD Education Working Papers*, No. 104, OECD Publishing, Paris, http://dx.doi.org/10.1787/5jz2jg1rqrd7-en.

The early 1990s can therefore be considered a breaking point in Swedish education policy and governance. From being one of the most centralised systems before the 1990s, only several years later it had become one of the most decentralised systems – though not in all areas. Swedish schools have a high degree of autonomy concerning allocation of resources. PISA 2012, for example, shows that in Sweden the vast majority of 15-year-olds (90%) are in schools where selecting teachers is the sole responsibility of the school. The proportions of schools that are responsible for establishing teachers' starting salaries (40%) and for deciding on budget allocations within the school (86%) are considerably higher than many other OECD countries (11% and 45% respectively) (OECD, 2013d).

Though schools have a high degree of autonomy for allocation of resources, they have comparatively low levels of autonomy over curricula and national tests. PISA 2012 shows that in Sweden 24% of 15-year-old students attend schools where school leaders or teachers decide which subjects are offered, compared with 36% of students across OECD countries; 33% of students in Sweden are in schools where course content is determined at the school level, compared with 40% of students across OECD countries; and 43% are in schools where student assessment policies are established at the school level, compared with 47% across OECD countries (OECD, 2013d). So despite the high level of local autonomy for allocation of resources, some areas of policy, notably curricula and assessment, have remained the prerogative of the central government.

Unclear roles and responsibilities

The various reforms that were initiated in the 1990s meant that a large part of the responsibility for education was transferred from the central government to the municipalities as well as to private organisers. The responsibility for ensuring good and equal education for all children, youths and adults is nowadays divided between the central government, municipalities and independent schools. The central government is responsible for establishing of national goals, captured in the curriculum and syllabi, and evaluates and monitors the performance of the system. Municipalities are responsible for organising education, allocating resources and running public schools in such a way that the national goals are met. Municipalities have to varying degrees further devolved responsibilities to principals.

However, as in most other OECD countries, the situation has been far from stable with further efforts to deregulate and decentralise decision-making authority in some areas (for example, decisions regarding the distribution of school time), while the central government is increasingly present and exercising its control in certain areas of policy. Already towards the end of the 1990s and in the early 2000s, there were signs that the central government was increasing its control over the system to some extent. One example is the reintroduction of targeted state-funding programmes that were explicitly directed towards specific activities such as hiring additional teaching staff.

An important development that brought greater vertical accountability to the system was the 2003 reintroduction of school inspections by the National Agency of Education. This was followed by the establishment of the independent Swedish Schools Inspectorate in 2008, which further strengthened accountability mechanisms of the system. The strengthened school inspections performed by the Schools Inspectorate expanded on measures that were already in operation but also reflected a changed policy toward public schools (Rönnberg, 2011). Today both public and independent schools fall under the same inspection regime.

Recently, accountability measures towards municipalities and organisers of independent schools were further strengthened, including an obligation for the Schools Inspectorate to use tougher sanctions regarding shortcomings related to achievement of learning goals (Eurypedia, 2014).

Another recent measure is the 2014 clarification to the Education Act that states that municipalities, principals and preschool directors are to allocate resources based on students' different abilities and needs. This measure seems a direct response to research evidence that shows that allocations of funding in municipalities were not always based on actual needs but rather on traditional spending patterns (NAE, 2011b). In addition, the change in the Act notes that students who have difficulty reaching the different knowledge requirements because of disabilities, shall be given assistance to counter the effects of the disability as far as possible.

Despite these strengthened accountability measures and clarified responsibilities of various stakeholders under the Education Act, several challenges remain. There still appears to be some ambiguity in the understanding of the roles and responsibilities: 1) between national and municipal levels; 2) within municipal administrations; and 3) between municipalities and principals (Blanchenay, Burns and Koester, 2014; MoER, 2015; NAE, 2011b). Officially, the central government sets priorities and goals, and under the Local Government Act, municipalities have full entire responsibility for meeting these goals. Several studies have noted that the burden of responsibility is not always clear for some of those working at the local level (Blanchenay, Burns and Koester, 2014; NAE, 2011b). In recent years, the central government has become increasingly involved in steering, supporting and controlling the school system through a range of reforms, policies and programmes, as described above. For some of those working at the local level, this may have added to the perception that the national government is ultimately responsible for goal attainment in schools.

The reforms that were initiated in the 1990s have resulted in a variety of governance arrangements at the municipal level. Even today, the perception of responsibility seems to vary greatly, both across people in similar positions in different municipalities, and between different bodies within the same municipality. The traditional division of who does what and how in municipalities usually corresponds to duties respectively assumed by the municipal assembly and the municipal executive committee, is often blurred in practice and does not always coincide with the distinction between elected officials and public servants. As might be expected, this lack of clarity has not always been helpful in ensuring smooth and efficient delivery of education services (Blanchenay, Burns and Koester, 2014).

At the school level, the principal of a municipal school is in an equally complex and hybrid situation. On the one hand, principals are as civil servants employed by the municipal school administration and therefore receive assignments from the municipal politicians. At the same time, principals have a direct assignment from the state. They are charged with reaching national goals and are responsible for the school's results being followed up and evaluated in relation to these national goals and knowledge requirements. In practice, however, the goals and priorities set by the municipality and the central government are not always the same.

The evidence has, for example, shown that high-level municipal decisions are, in many cases, based on narrow result information in the form of a few key figures, rather than on qualified analyses of the municipalities' entire responsibility for education and schools. Municipalities also often prioritise particular forms of evidence (for example,

media-friendly rankings and the like) that are important politically but do not represent the depth and breadth of information necessary for making strategic choices for the long-term development of education (NAE, 2011b; Blanchenay, Burns and Koester, 2014). So, although arguably clear on paper, in practice the roles and responsibilities of principals are not always clear and, in some cases, this has contributed to poor relationships and distrust between principals and the municipal political leaders.

In addition, some studies have noted a mismatch between roles and powers of the central government (NAE, 2011b; Blanchenay, Burns and Koester, 2014). The central government has few enforcement mechanisms in place to ensure compliance with national goals. If serious shortcomings are identified in a school, the Schools Inspectorate can determine that the deficient school should be closed for up to six months until the deficiencies are corrected. However, this is very much a last resort and has rarely been applied.

The second lever is financial, in the form of special direct grants to schools for which they can apply. This lever, however, is weaker than expected, as these grants have not had the intended effect: most applications come from schools that are already doing reasonably well, particularly from independent schools and those in larger municipalities. There may be a capacity issue that hinders smaller, less able schools from applying for these grants, and, as a result, resources may not reach the schools that need them most (Blanchenay, Burns and Koester, 2014; MoER, 2015). In light of this, it is no surprise that municipalities have little concern about the consequences of not meeting a particular goal.

These studies have also noted a mismatch in powers and responsibilities at the municipal level. Interviews with municipal leaders revealed that they do not always find the national goals in the curriculum and syllabi useful for planning and accountability purposes. They are often perceived more as long-term visions than as goals to be fulfilled, because they are too broad and are too numerous to be achieved within the resources available to municipalities (NAE, 2011b).

There is another challenge related to capacity at the local level. Earlier, we noted the variable quality of principals. Evidence also points towards a lack of capacity within municipalities. Several reports have noted the lack of capacity to efficiently use resources to enable smooth functioning of the system (Blanchenay, Burns and Koester, 2014; NAE, 2011b; MoER, 2015). Several reports also noted a lack of capacity within municipalities for using assessment data to monitor and systematically improve education (Nusche et al., 2011; NAE, 2011b; Blanchenay, Burns and Koester, 2014). Instead, municipal politicians and administrators often prefer other sources of knowledge (traditional spending choices, simple comparative measures rather than a holistic assessment of cause and effect, and pressure from the media and parents) to careful use of indicators and research generated by the system (Blanchenay, Burns and Koester, 2014).

In sum, it appears that the historic move towards increased local autonomy has not been matched by adequate building of professional capital and sufficiently clear accountability measures. More than 20 years later, this lack of capacity, the imbalance in accountability and local autonomy, together with a lack of clarity in roles and responsibilities at various levels of the education administration, form key challenges for improving student performance and driving the system forward.

Increased focus on assessment and evaluation, but underdeveloped synergies in arrangements

Authentic, valid and reliable evaluation and assessment, leading to improvement of educational practices at all levels and lift student learning, are central to establishing a high-performing education system. They are also instrumental in recognising and rewarding the work of educational practitioners and certifying the learning of students. Promoting evaluation and assessment is clearly in the interest of students and their families, educational practitioners and education systems (OECD, 2013e). Therefore, governments and policy makers in many countries are increasingly focused on assessment and evaluation of students, teachers, school leaders and education systems.

Sweden has emphasised evaluation and assessment at the various levels of its education system and as a means of driving its reform agenda. A key element of the Swedish approach to management by objectives is the idea that all levels of the education system should use data from assessment and evaluation for analysis, comparison and improvement. The government has emphasised the importance of high-quality data collection systems, evidence-based policy making, increased external control of schools, earlier assessment, and follow-up of individual students to prevent failure (Nusche et al., 2011).

OECD Reviews of Evaluation and Assessment in Education: Sweden 2011 (Nusche et al., 2011) concluded that while key elements of evaluation and assessment are well established at student, teacher, school and system levels, challenges remain in aligning the different elements to ensure consistency and complementarity. A recent governmental commission report (SOU 2014:12) corroborated the key recommendation of the OECD report to develop a coherent evaluation and assessment framework. A written proposal has been submitted to parliament for development of the proposed evaluation and assessment framework.

Various other measures have been undertaken since 2011 to strengthen the Swedish school system's evaluation and assessment arrangements. Several of these respond directly to the challenges and recommendations raised in the 2011 OECD report, while others respond to a lesser degree or not at all.

Student assessment data lacks reliability

There is a strong focus on classroom-based assessments in Swedish schools. Through these assessments, teachers collect a wide range of evidence on students' progress and provide regular feedback to students. Reforms in recent years to strengthen assessment and evaluation include new curricula and syllabi with clearer proficiency goals and knowledge requirements in compulsory education, a new grading scale with more steps, the introduction of grades from Year 6 and compulsory national tests in Years 3, 6 and 9.

An area of particular concern noted in the 2011 OECD report – one that remains a primary concern in our view – is the equivalence of student grades (i.e. reliability) across schools. Current reporting of student outcomes in Year 9, at the end of compulsory school, heavily relies on reliability of the grades awarded by teachers. Various sources have pointed towards uneven scoring of students' assessments, as the weights of the test results in students' grades are determined locally.

It is hoped that the new curricula with clearer proficiency goals and knowledge requirements will help address at least some of the unevenness in teacher grading, both

within schools and between schools. The National Agency for Education has further made available to teachers many open courses in assessment and grading to help enhance their assessment knowledge and skills. The evidence, however, suggests that further efforts will be needed to strengthen teachers' formative and summative assessment skills. Swedish teachers seem to agree with our assessment. TALIS 2013 shows that the most important professional development needs reported by Swedish teachers are related to student evaluation and assessment practices, along with ICT skills for teaching (OECD, 2014h). The Swedish Schools Inspectorate further informed us that they frequently find that many Swedish teachers have underdeveloped assessment skills, with particular mention of limited knowledge and understanding of how to implement formative assessments for day-to-day teaching and learning – including skills for setting up learning situations, developing sophisticated questions, providing timely feedback (Nusche et al., 2011).

Appraisal of education staff for professional development

One of the key challenges raised in the 2011 OECD report was the absence of a formal framework of professional standards that spells out what is considered effective teaching and can inform professional development of teachers. Several years onwards there are still no national standards for teachers and school leaders regulated by law and no formal procedures exist, and teacher appraisal has not been a central topic in the Swedish school policy debate (MoER, 2015). The evidence also shows that professional feedback opportunities continue to be scarce (a related challenge mentioned in the 2011 report). In TALIS 2013, most Swedish teachers reported that they received feedback only from the principal, and that this feedback had little effect on their practices in the classroom. Just under half of all teachers in the study stated that they changed their teaching after receiving feedback.

Our interviews with teachers, school leaders and other stakeholders support these findings and corroborate earlier findings that the link between teacher appraisal, professional development and school development remains underdeveloped. This is something that we consider a missed opportunity for improving student learning in Swedish schools.

Building capacity for school self-evaluation

Swedish schools are assessed through both self-evaluations and external evaluations and are accountable to parents, the community, the government and agencies. As mentioned earlier, since 2008, the Schools Inspectorate has taken over responsibility for external school evaluations from the National Agency for Education. School inspections follow nationally established standards focusing on results (norms, values and knowledge), activities (teaching, steering, management and quality work) and conditions (resources and access to information and education) in schools. These standards are still less fully elaborated than in countries where there is a longer tradition of inspection. Reports produced by the Schools Inspectorate are publicly available online for each school though the SIRIS[5] system. Larger cities are also conducting school inspections, either employing full-time inspectors or hiring teachers or school leaders on a part-time basis.

Qualitative self-evaluation processes are an important component of the school evaluation system in Sweden. Since the late 1990s, schools and municipalities have been obliged to produce yearly quality reports with the aim of "informing citizens and others

about the performance of the municipal schools" (MoER, 2015). This obligation was abolished in 2010, which may have been an error considering the recent reports of the Schools Inspectorate on self-evaluation and quality management processes of schools and education providers.

It is important to note that there are concerns in Sweden about the quality of school inspections. A recent report by the Swedish National Audit Office, for example, has been critical of the quality of inspections for supporting student improvement, noting among other issues the limited follow-up support available to schools (SNAO, 2013).

Strengthening system-level data collection, analysis and presentation

As explained in the 2011 OECD report, education system evaluation is well established, but collection and presentation of data could be further improved. The report noted the concerns about quality of data collected on student performance mentioned above and about its appropriateness for system-level monitoring. This issue has not yet been resolved.

The report also noted that improving the way existing data is presented could help optimise usability for local policy makers and stakeholders and that, despite concerns about variability of quality procedures across municipalities, there was little analysis at national level of performance differences between municipalities (Nusche et al., 2011). We have also mentioned the lack of availability at the national level of data and information that is sometimes very basic, such as the background of staff, their employment status, or their participation in professional development activities.

In response to this situation, the National Agency for Education has been given the task of building a new online national information system for all schools. The system, planned to be fully operational by 1 July 2015, aims to make it possible to compare different schools and reporting in an easily accessible format. The mandatory information system will contain information from official statistics and the Schools Inspectorate, as well as information collected through customer surveys and reports from schools.

Education reform is a priority, but reform efforts lack a strong strategy

Education is a public priority for the Government of Sweden. A considerable proportion of public funds are spent every year educating Sweden's youth. Sweden was long considered to have one of the best-performing education systems among OECD countries. The downward trend in student performance in various international assessments was therefore a surprise to many. These disappointing results, and in particular the PISA 2009 and 2012 results, fuelled an already thriving public debate about the quality of education and resulted in a broad consensus that it is time for action.

In Sweden, reforms and policies are often the result of comprehensive consultations. Key stakeholders generally consulted on education policy decisions are the Swedish Association of Local Authorities and Regions (SALAR), the Swedish Association of Independent Schools, the two national teacher unions (Swedish Teachers' Union and the National Union of Teachers), the Association of School Principals and Directors of Education, and the various parent associations and student councils (Nusche et al., 2011). Through this process of consultation, Swedish reforms can often count on endorsements from the profession and other stakeholders involved.

In striving to turn the tide in recent years, the Swedish government has implemented a considerable number of reform measures aimed at supporting schools to reverse the downward trend in student performance (Table 1.2). There appears to be general support among the profession and other key stakeholders for these reforms and policies. However, evidence also suggests that not all municipalities and schools are responding equally well to achieve the desired changes.

The reforms of recent years are important, but evidence suggests they are also somewhat piecemeal, and simply too few, considering the serious situation of the Swedish school system. Various reforms and policies are also implemented rather independently of one another. In a context of already strained capacity, in particular in some of the smaller municipalities, there is a risk of only partial implementation of these reforms.

The related shift to outcome-based steering of the education system requires the central government and school organisers, as well as individual schools, to systematically follow up and evaluate educational activities in relation to goals and conditions that apply to them (Le Grand, Szulkin and Tahlin, 2005). However, as mentioned earlier, some municipal leaders and administrators consider the national goals too broad to inform them in their planning. Evidence suggests that when resources are considered too limited to respond to all the national goals and knowledge requirements set out in the curriculum, some municipalities have resorted to cherry-picking priorities (NAE, 2011b; Blanchenay, Burns and Koester, 2014).

The lack of clarity and/or capacity for identifying and prioritising the issues that matter most to improving schools and student learning are further complicated by the current absence at various levels of the system of a common monitoring and evaluation framework for quality monitoring and steering improvements. The proposal for a monitoring and evaluation framework that the Swedish government is currently considering seems a good way forward to strengthen and align quality-monitoring processes and steer Sweden's reform journey towards realising its education priorities and improving the performance of its students.

Conclusion

PISA 2012 revealed a sharp downward trend in the performance of Swedish 15-year-olds in all three core test subjects over the last decade – a larger decline than in any other OECD country during that period. Other international and national assessments and studies, including this review, confirm that there are reasons to be concerned about the quality of the Swedish school system. Various reforms and policies have been implemented in recent years to reverse the downward trend in student performance. The OECD review considers that these reforms are tackling many of the challenges in a piecemeal approach. There is a need for a much more ambitious and comprehensive reform effort to improve the performance of all Swedish students.

Sweden has strengths and opportunities to build on to achieve this goal. There is a broad consensus among different stakeholders, including the profession and politicians, on the need for change and strong support for the various school reforms and policies of recent years. Sweden also has a comprehensive school system that emphasises inclusion and is relatively equitable. Students are, on average, motivated to learn and positive about their school education and have relatively good relationships with their teachers. Sweden

also recognises the importance of supporting disadvantaged students and students with special education needs who are generally mainstreamed into regular schools and classes.

However, the Swedish school system faces a number of challenges. These include the low and decreasing performance of Swedish students, with large numbers of low performers and few high performers in all PISA domains. Learning environments are not always conducive to learning and can be insufficiently challenging, with high student truancy and lack of perseverance in learning. Conditions are not adequate to nurture an excellent teaching profession. Teaching is considered a low-status and relatively unattractive profession, due to heavy workloads, relatively low salaries for experienced teachers and limited opportunities for appraisal, feedback and professional development. School leaders and their employers (municipalities and independent schools) do not accord sufficient priority to pedagogical leadership. In addition, their heavy workload and the unclear relationships and distrust between principals and their employers contribute to high turnover.

Overall, the current approach of setting national goals for the highly decentralised and complex system (with 290 municipalities and many more private organisers responsible for education) is not delivering consistent steering or support for improvement, and responsibility for education appears diffuse. Local autonomy is not matched with adequate public accountability or consistent support. Underdeveloped assessment and evaluation arrangements and a lack of capacity at the local level are also key challenges to improving student performance.

In addition, school improvement efforts are diluted by a lack of clarity and different perceptions at various levels on what the education system should be delivering. The absence of clear education priorities and an overarching education strategy hinders alignment and coherence between the various reforms and policies, and diminishes their effectiveness.

Our analysis of the Swedish school system's strengths and challenges, informed by research evidence and relevant practices and lessons from strong performing education systems internationally, allows us to propose a number of concrete interrelated policy recommendations and policy actions to form a comprehensive base for a national school improvement strategy (Chapters 2 to 4).

Notes

1. Sweden joined the European Union in 1995 but rejected Eurozone membership following the referendum in 2003.

2. Sami are the indigenous Finno-Ugric people inhabiting parts of northern Norway, Sweden, Finland, the Kola Peninsula of Russia, and the border area between south and middle Sweden and Norway. Sami schools are state-governed and part of the Swedish public school system. As such, they are governed by the same curriculum as primary schools. Sami schools are open to all children whose parents are Sami.

3. Rank 28 is the best estimate in mathematics and rank 27 the best estimate in reading and science. However, due to sampling and measurement error, the rank could be between 26 and 29 in mathematics, between 23 and 30 in reading, and between 26 and 28 in science.

4. Under the new grading scale (2011) the merit rating is based on the following: A equals 20 credits; B equals 17.5 credits; C equals 15 credits; D equals 12.5 credits; and E equals 10 credits. As of 2014, it is also possible to get a maximum of 20 extra credits if the student gets a pass grade in an optional language course (e.g. in Spanish).

5. SIRIS, an Internet database containing information on education and childcare, is the National Agency for Education's online information system on results and quality. It has been in operation since 21 September 2001.

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Part II:

A comprehensive reform agenda for school improvement

Chapter 2:

Promote quality with equity across Swedish schools

This chapter reviews the challenges and opportunities for delivering equity and quality for all students in Swedish schools. Despite high investment in education and high levels of adult skills, the school system is struggling to deliver high quality education, with declining PISA performance, an increasing proportion of low performers and a decreasing proportion of high performers.

Two challenges hinder the ability of Swedish schools to deliver equity and quality of education: 1) expectations for student performance appear low in many schools and, with poor disciplinary climates, learning environments are not conducive to learning; and 2) structural conditions, including funding and school choice arrangements, are not conducive to ensuring high-quality provision for all students, with high variability across municipalities.

Concrete policy actions would help Sweden ensure that its schools are meeting the learning needs of all students. They should set high expectations for all students, building on the curriculum as a driver. Sweden needs to clarify objectives for students and teachers, set clear standards, and ensure adequate training for teachers to deliver the new curriculum. It needs to develop mechanisms in schools to prevent failure, with early interventions focused on literacy and numeracy, and to continue and consolidate support for migrant students.

At the system level, the Ministry of Education and Research needs to review a number of structural arrangements that may hamper equity without necessarily delivering higher levels of quality in education. These include funding mechanisms for schools and students, school choice criteria, or integration of independent schools into local planning and collaboration with public schools for delivery of quality education.

Recommendation 1: Establish conditions that promote quality with equity across schools in Sweden

Ensure that all students can reach higher levels of performance, by raising and clarifying expectations building on the curriculum, introducing early identification and intervention of failing or at-risk students, and using formative assessment and support for more personalised learning to engage students. Nationally, address systemic practices that can hamper equity by reviewing school and student funding mechanisms to ensure their consistency across municipalities, reviewing school choice arrangements to reduce segregation of students, and including independent schools in municipal planning.

The highest performing education systems across OECD countries are those that combine high quality with equity. In such education systems, the vast majority of students can attain high-level skills and knowledge that depend more on their ability and drive than on their background (OECD, 2012a). For Swedish education performance to increase and reach that of high-performing systems, it is important to target both fronts, focusing on quality of education while continuing to deliver equity. There are currently a number of factors that hamper progress towards greater student engagement and motivation for higher performance and some structural practices that prevent progress for schools.

In recent years, Sweden's student performance has declined in all key domains of literacy, numeracy and science, from above or around the OECD average to below the OECD average. The share of low-performing students has increased, and the share of top-performing students has decreased significantly. Other international data confirm the findings on declining student scores in core areas of literacy and numeracy.

Sweden is committed to ensuring that all students have a quality education. Education is a priority for Sweden, with 6.8% of its GDP devoted to public expenditure on education (compared to the OECD average of 5.6%). It has the highest proportion of public funding in education (97%) among OECD countries.

Overall, Sweden has an equitable school system compared to other OECD countries. PISA shows that variation in results across schools or by groups is below the OECD average. Sweden has a comprehensive school system and provides additional funding and other arrangements to support disadvantaged and other population groups, such as migrants. But there are a number of features which, if not targeted properly, may contribute to reducing quality. Structural features such as unclear funding strategies and current school choice arrangements may be hindering progress on both equity and quality.

The Swedish education system is decentralised and based on principles of autonomy. Public funding is allocated to schools mainly through municipal grants to public and independent schools. Special national funding is targeted to selected national priorities, often disadvantaged students or those with a migrant background.

Overall, the amount spent on education is above the OECD average, as is expenditure per student. But funding approaches do not appear to reach the more disadvantaged or those that may need it most, and funding strategies are unclear across municipalities. At the same time, PISA results demonstrate that the quality of education outcomes has declined to below the OECD average, suggesting that funds may not be spent as effectively as they could be.

To support greater quality and equity in school education, Sweden can review how schools can ensure that all students reach higher levels of performance and how system-level policies and practices can achieve their objectives more effectively.

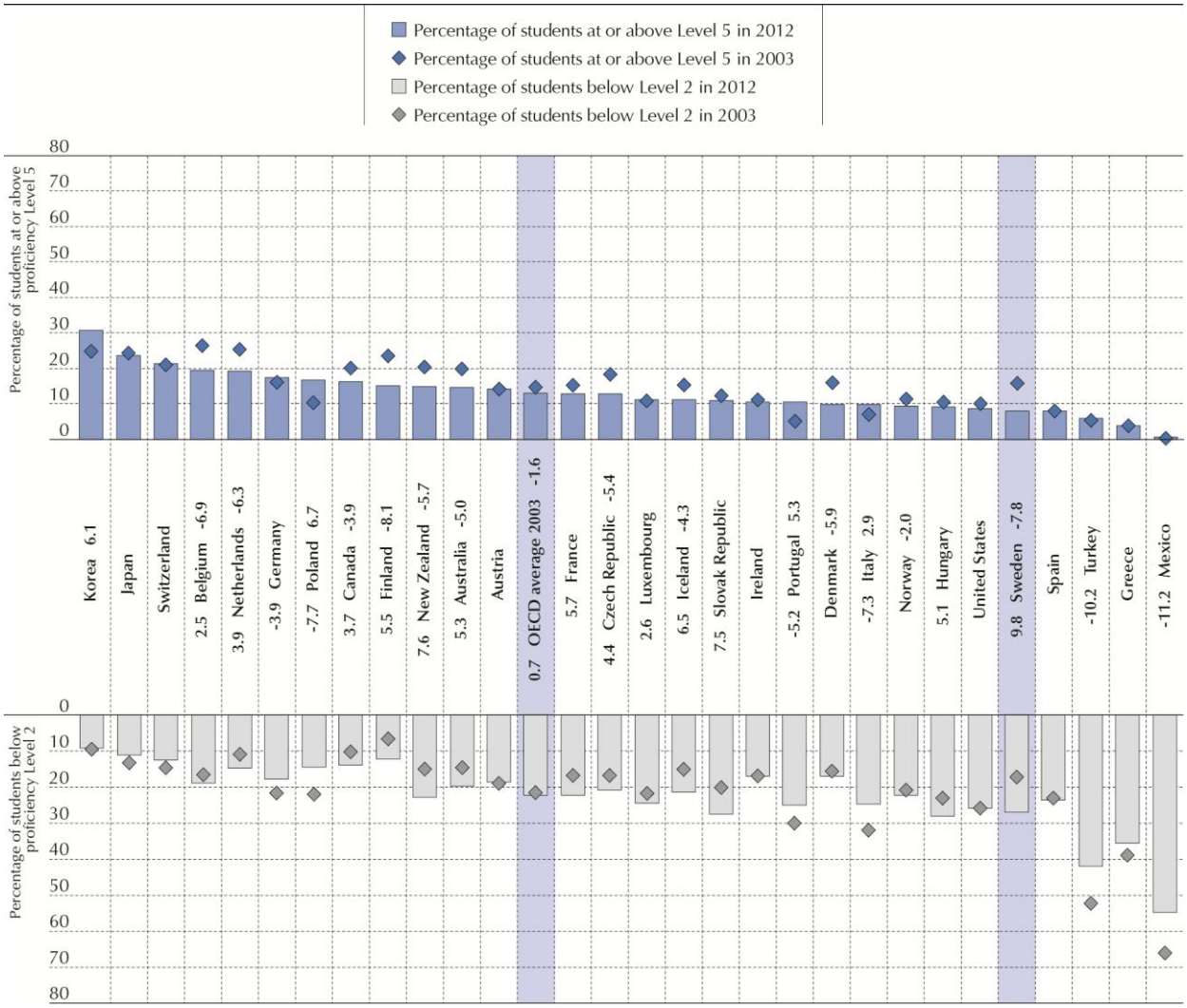
Students not challenged to reach their highest potential

PISA assesses "the extent to which students near the end of compulsory education have acquired some of the knowledge and skills that are essential for full participation in modern society, particular in mathematics, reading and science" (OECD, 2014a). Over the last decade, the performance of 15-year-old Swedish students in PISA has declined in all three disciplines tested, and it is now below the average of their peers in other OECD countries. Other international data confirm these findings on declining student scores in core areas of literacy and numeracy. The decline is evident across different groups of students and schools:

- The proportion of high-performing students (at Level 5 or above) decreased from 15.8% in 2003 to 8% in 2013, below the OECD average of 12.6 % (Figure 2.1.).
- The proportion of low-performing students in Sweden (below proficiency Level 2) increased to 27.1% in 2012 (17.3% in 2003), above the OECD average of 23.1%.
- The decline is consistent across the school system, among public and independent schools, and among all groups of students, regardless of socio-economic status, immigrant background or gender.
- Boys' performance has declined more than girls' performance, particularly in reading. In addition, 65% of the low performers in Sweden are male compared to the OECD average of 61%. One in five Swedish boys are low performers (performance below proficiency Level 2) in all three domains tested, well above the OECD average of 14% (OECD, 2013a; OECD 2013b; OECD 2014a).
- At later ages, while Swedish adults have high literacy and numeracy skills, young adults (age 16-24) have higher proficiency in literacy and problem solving but lower proficiency in numeracy than the overall population.
- Swedish adults scoring at the lowest levels in literacy have nearly three times the risk of those with high levels of literacy of reporting poor health, a larger proportion than in most countries (OECD, 2013c).

To understand why student performance has declined over the last decade in relation to high skills performance of the adult population, it is crucial to examine closely what is happening in – and beyond – Swedish classrooms in terms of student learning.

Figure 2.1. Percentage of low performers and top performers in mathematics in 2003 and 2012



Source: OECD (2014a), *PISA 2012 Results: What Students Know and Can Do (Volume I, Revised edition, February 2014): Student Performance in Reading, Mathematics and Science*, PISA, OECD Publishing, Paris, http://dx.doi.org/10.1787/9789264208780-en.

Decreasing engagement with school

Engagement with school and at school is crucial for students to make the most of learning opportunities and be ready to translate their potential into high-level skills. Students need to be engaged, motivated and willing to learn new things and feel they can succeed (Christenson, Reschly and Wylie, 2012). When students believe that investing effort in learning will make a difference, they score significantly higher in mathematics (OECD, 2013d). Low student engagement is associated with negative student performance. At the same time, research into what makes schools effective shows that learning requires an orderly and co-operative environment, both inside and outside the classroom (Jennings et al., 2013).

In Sweden, PISA 2012 shows that student motivation and engagement in learning are variable. Learning environments appear positive. Students rate teacher-student

relationships higher than the OECD average, are motivated to learn mathematics and have a generally positive attitude towards learning and school education. For example, more than 85% of students think that students get along well with their teachers (compared to the OECD average 82%), and 77% of students think that most teachers really listen to what students have to say (OECD average 74%).

In addition, Swedish students are open to problem solving and, according to PISA 2012, have relatively high levels of intrinsic and instrumental motivation to learn mathematics. One in two students (51%) enjoys reading about mathematics (intrinsic motivation), a significantly higher proportion than the average across OECD countries (31%). Instrumental motivation of students is high (the index of instrumental motivation for Sweden is 0.18). In fact, between 2003 and 2012, the increase in instrumental motivation to learn mathematics in Sweden was highest of all OECD countries. However, while greater motivation can give the highest-achieving students an edge in performance, motivation seems to have little relationship with performance among the lowest-achieving students (OECD, 2013d).

Almost all Swedish students (95%) think that trying hard at school will help them to get a good job (91% OECD average). The proportion of Swedish students who believe that achievement at school is mainly a product of hard work is also above the OECD average. The relationship between students' perceived control over their success in mathematics and their performance in mathematics appears to be particularly strong among the highest-achieving students.

On the other hand, several indicators suggest low and decreasing engagement and performance of Swedish 15-year-old students (OECD, 2013d):

- Sweden has the highest percentage of students arriving late for school among all OECD countries, especially among socio-economically disadvantaged and immigrant students, and the lack of punctuality has increased between 2003 and 2012. There is also a higher-than-average percentage of students in Sweden who skip classes, in particular among disadvantaged and immigrant students. Arriving late for school and skipping classes are associated highly negatively with mathematics performance in PISA and can have serious adverse effects on the lives of young people, as they can cut into school learning and also distract other students.
- Learning environments in Sweden are described by students as less conducive to learning than in other OECD countries. In Sweden, 38% of students reported that there is noise and disorder in most or every lesson (compared to the OECD average of 32%) and 32% of students reported that they don't start working for a long time after the lesson begins in most or every lesson (compared to the OECD average of 27%). Student misbehaviour can lead significantly to teacher burn out and high teacher attrition, and learning environments that are not conducive to learning tend to have a strong negative impact on student performance (Aloe et al., 2014).
- The index of perseverance is lower among Swedish students (-0.25) than the OECD average and it has decreased significantly between 2003 and 2012. Perseverance measures the willingness of students to work on problems that are difficult, even when they encounter problems. It is crucial to become proficient in any endeavour. This indicator is associated positively with mathematics performance.

- Anxiety towards mathematics, which tends to have a negative impact on mathematics performance, has increased in Sweden. The rate of this increase is the second highest in all OECD countries between 2003 and 2012, although anxiety towards mathematics is still slightly below the OECD average.

The evidence clearly warns of the potential negative impact of truancy on student performance (Giacomazzi, Mueller and Stoddard, 2006; Buscha and Conte, 2010; OECD, 2013d). However, most Swedish school principals do not see truancy as a hindrance to learning.

A healthy school climate contributes to effective teaching, learning, and fewer disciplinary problems. Setting the right disciplinary climate can help ensure more time for effective teaching and learning. A fundamental challenge facing faculty and staff each day is, therefore, to promote and nurture a wholesome and learning-supportive climate throughout the school (Nelson, Martella and Marchand-Martella, 2002).

After analysing all the data and information, the picture emerged that in many Swedish schools expectations of students and demands on them are often too low, leaving students insufficiently challenged and motivated to reach above their existing level and capacity, something which research evidence shows to be of great importance for effective and continuous learning (Dumont, Istance and Benavides, 2010).

Another factor related to motivation is the apparent gap between students' life outside school (and their future work life) and the reality in terms of integration of technologies in classroom learning. Sweden has one of the highest levels of Internet penetration across OECD, and Swedish family and professional environments are among the most connected of OECD countries. More than half of Swedish workers (57%) reported new ways of working due to the introduction of new processes or new technologies in their workplace, the highest reported change among all OECD countries (OECD average 42%) (OECD, 2013c).

Children and young people are avid users of the Internet and new technologies, especially boys (OECD, 2015a). More than half of Swedish 2-year-olds (57%) have started to use the Internet occasionally, and 80% of 11-year-olds use it daily. While children between 12 and 15 report that the Internet is one of their most important sources of information, only 35% use it daily for schoolwork in school (Findahl, 2014). Similarly, only 33.8% of Swedish teachers report use of personal computers in their lessons (below the OECD average of 37.5%), and 25.5% of Swedish teachers reported needing further training to develop their ICT skills for teaching (TALIS average 18.9%) (OECD, 2014b). Bridging the gap between school and external environments can contribute to improving motivation of students towards learning, especially boys.

At the same time, labour market incentives for Swedish students are lower than for students in other OECD countries. The difference in earnings between adults with a tertiary education and those with an upper secondary or post-secondary non-tertiary education is quite low compared with other OECD and partner countries. Among 25-34 year-olds, the tertiary earnings premium is the second lowest across OECD countries, after Norway (OECD 2014d). One of the reasons for this is the low wage dispersion in Sweden, which might not provide sufficient incentives for individuals to make the educational and career choices that would benefit society the most (Hoeller et al., 2014).

Graduation rates from upper secondary education for students in Sweden (77%) are lower than the OECD average (84%) (OECD, 2014c). In addition to the lack of wage incentives, this might be fuelled by the fact that in Sweden, even when youth find

employment, many of the jobs do not correspond to their field of study (OECD, 2013c). Swedish students might be less motivated to study and complete school due to lower incentives in the labour market as well as a generous welfare system that may be a disincentive for further learning.

Overall, engaged students generally get better grades and perform better on standardised tests (Wang and Holcombe, 2010). In addition, students are eager to engage in authentic learning (pedagogic experiences to learn more deeply) and perform better on complex tasks (Dumont, Istance and Benavides, 2010). Disruptive and disengaged students are more likely to repeat a Year than well-behaved students, require special education services and have serious behavioural problems in later adolescence (Thomas et al., 2008). The problem of disengagement is particularly acute during secondary education in general, as students reach adolescence and beyond (OECD, 2011a).

Responses require action targeting many fronts, including raising expectations and engagement, by providing student-centred teaching and learning strategies, and offering challenging and relevant curriculum and support. Teachers need to be prepared to deliver the curriculum effectively, using teaching strategies that cater to students' diverse learning approaches and engage them. Students need to be motivated and supported by ensuring that content is well aligned from one Year to the next, using effective teaching and learning strategies, and assessing individual needs as students move from early childhood education and care through primary and secondary school. This can have positive effects on engagement and contribute to higher performance (OECD, 2011a).

One of the ways Sweden chose to tackle lower graduation rates from upper secondary education was by establishing five introductory programmes (in 2011). These programmes are meant for students who have not reached the entrance requirements for national upper secondary programmes or who wish to meet requirements for a specific higher education preparatory programme. Evidence, including that from this review, shows that such programmes can be valuable alternatives for completion among population groups for whom preventive approaches may have been unavailable or unsuitable (OECD, 2015b; OECD, 2015c).

Sweden may further look towards the examples of other countries to raise students' engagement with school and learning. In Norway for example, the Better Learning Environment initiative (2009-14), included local school development projects and evidence-based guidance materials on what works to create better learning environments for students. Many other education systems are reforming their curriculum or introducing reforms to raise student engagement and learning. Northern Ireland, for example, introduced Every School a Good School (2009) to enable schools to raise standards and address barriers to student learning for better outcomes. An implementation plan published with the policy sets out key actions, targets and timescales (OECD, 2015b).

Expectations and objectives to challenge students towards higher performance

Setting high expectations is key for student learning and for making students active participants in their learning. Research on learning shows that schools should set clear expectations for students, demand hard work, challenge them without overloading, and use assessment strategies consistent with these expectations – including a strong emphasis on formative feedback. It highlights that all learners need to be sufficiently challenged to reach above their existing level and capacity (Dumont, Istance and Benavides, 2010). Therefore, schools need to set high expectations for all children, regardless of their levels of disadvantage and the achievement levels with which they enter school (OECD, 2012a).

More concretely, schools can contribute to shaping students' dispositions and self-beliefs and promote greater engagement with school and learning through the curriculum and the strategies and practices teachers adopt in their classroom (Hipkins, 2012; Wigfield, Cambria and Eccles, 2012). Previous research has also shown a relationship between students' exposure to subject content in school (what is known as "opportunity to learn") and students' performance (Schmidt et al., 2001). Swedish students and teachers reported to the OECD review team that sometimes doing just enough was sufficient to get through school. This lack of perseverance regarding learning could be hampering their achievement. Swedish students expressed this in the PISA 2012 survey, when only around 40% indicated that they do not give up easily when confronted with a problem, compared to 56% of students in other OECD countries. In addition, Swedish students reported that they have fewer opportunities to learn mathematics and that some of their teachers' classroom strategies are not sufficiently rigorous (OECD, 2013d).

One in five students in Sweden are in schools whose principal reported that teachers' low expectations of students hinder learning, compared to the OECD average of 15%. High-performing school systems set high expectations for all their students from all backgrounds, and schools and their teachers set in motion strategies for effective student learning.

Looking at more concrete practices in schools, students are aware of and report low expectations from their teachers: only 33% of Swedish students report that their teachers give them problems that require them to think for an extended time (below the OECD average of 53%), and only 49% percent of Swedish students report that their teachers present them with problems that require students to apply what they have learned to new contexts (compared to the OECD average of 62%). Teachers' use of cognitive activation strategies – such as giving students problems that require them to think for an extended time, presenting problems for which there is no immediately obvious way of finding a solution, and helping students to learn from their mistakes – is associated with students' drive (OECD, 2013d).

In 2010, the Swedish Schools Inspectorate undertook a study that touched on schools' ability to develop students' ability in critical thinking, to develop student participation and influence, and to give extra stimulation to particularly capable students. This study focused on expectations of student performance among teachers in compulsory schools and on how they adapted education to differing student needs. It found that over half the schools surveyed had low expectations of students and were satisfied with students reaching a passing grade. It also found that the schools' expectations differed between low-performing and high-performing students, between boys and girls, and between students with different social, economic and ethnic backgrounds.

The study also found that half the schools analysed did not sufficiently adapt education to students' individual needs. The adaptations schools make are, to a great extent, conventionalised solutions – for example to calculate more sums in the mathematics textbook (Swedish Schools Inspectorate, 2010). By contrast, PISA data showed that 62% of Swedish students report that their teachers give different work to classmates who have difficulty learning and/or to those who can advance faster. That is more than double the OECD average of 30% (OECD, 2013d).

Swedish education was driven by the curriculum set in 1994 (Lpo 94), until it was replaced in 2011. The 1994 curriculum had been designed to adapt to decentralised school management, providing freedom to municipalities and schools to deliver it throughout school cycles, without clear annual guidelines or expectations. Objectives

were set for the end of education cycles, without concrete information on learning expectations for each school year (Kuiper and Berkvens, 2013). Selected evidence suggests that the curriculum was abstract, had no concrete time allocation for specific subjects, allowed for various interpretations and was difficult for teachers to implement (Rubin, Clift and Stasz, 2007). In addition, assessment was confusing, with conflict between how to evaluate and assess the goals in the national curriculum and how knowledge was to be assessed and evaluated in the marking system (Kuiper and Berkvens, 2013).

More concretely, starting in 1994, curriculum goals were set at the national level. Learning goals were at two levels: goals to aim for and goals to attain, the latter being the minimum required level of achievement. The National Agency for Education further developed these goals into subject-specific syllabi and grading criteria without including specifications about teaching content. At the municipal level, the goals and syllabi were then further developed for each subject and grade level. With the decentralised approach to education, the process for doing this was very uneven across the country. All schools developed their own work plans, setting their goals, plans for improvement and indicators to monitor progress. Again, processes varied from school to school. Within each classroom, teachers and students then worked together to develop specific goals for each course and semester, based on the national goal documents and local work plans.

In principle, there has been a high degree of exchange about objectives between teachers and students and their families. From the earliest years of schooling, teachers discuss goals and knowledge requirements with their students. They have to ensure that students and parents are well informed about the goals and receive regular feedback on their progress. Individual development plans (IDP) with individualised goals are prepared for each student in Years 1-5. These are developed collaboratively between teachers, individual students and their parents (Nusche et al., 2011).

The OECD review on evaluation and assessment in Sweden noted that there was "insecurity among teachers about how to best implement the curriculum and grading criteria so as to ensure a fair assessment of student performance" (Nusche et al., 2011). The fact that each teacher can determine the content of subjects leads to concerns about equivalence of education across the country. In particular, difficulties tend to arise when students change schools. The review noted that school-level professionals and stakeholder groups communicated consistently that the 1994 curriculum did not come with sufficient guidance, support materials and training to ensure equivalence in education and equity in student assessment. Other evidence from Sweden has presented similar conclusions (NAE, 2013c).

The 2011 curriculum was introduced for preschool, compulsory and upper secondary education and provides general goals, guidelines and syllabi for each core subject, and defines clearer knowledge requirements. While the central government defines the curriculum, teaching methods and materials are not subject to central regulation. Individual teachers decide on appropriate teaching methods, selection of topics to be covered (within the framework of the syllabus, for example regarding the central/core content for each subject) and choice of teaching materials. According to the Education Act (2011) and the curriculum, students should have an influence over the organisation of teaching and should be given increasing responsibility for their own work at school as they get older and more mature.

As mentioned earlier, the curriculum is complemented with mandatory national subject tests, held in Years 3, 6 and 9 of compulsory school, to assess student progress,

and there are new qualification requirements and a new grading scale starting in Year 6. During the review visit, the OECD review team heard about difficulties teachers were having with the new grading scale and also heard anecdotal evidence from students about its systemic application, as different teachers had different expectations for each grade (MoER, 2015).

Questions arise regarding the curriculum and its effectiveness as a guiding document for schools and their teachers, and the content and strategies teachers use in relation to student learning. Declining PISA results have been in evidence between 2000 and 2012, so possible associations with curriculum would refer to the 1994 curriculum and its use in schools, but also to the strategies used to engage students and their learning. The data show that Swedish students may not be challenged enough and that teaching approaches may not be effective. As noted previously, the 2011 curriculum more clearly spells out the goals for knowledge to be acquired, both generally and by subject at the end of each cycle. Effective and consistent curriculum support for teachers from the national level can contribute to greater clarity for teachers and their students. The National Agency for Education has produced support material for assessment for each subject.

Another related issue is the use of assessment in classrooms. Schools in Sweden make more use of written feedback from students than the average OECD country. Teachers in Sweden are required to continually inform the students about their progress. However, an issue that has been raised through the OECD review visit and also in the literature is the wide variation in teachers' assessments of students. This raises questions about their ability to use assessment in a systematic manner that reflects student learning (Johansson and Rosén, 2008; Swedish Schools Inspectorate, 2012).

The variability was enhanced by the introduction of a criterion-referenced grading system with a large scope for teachers to interpret objectives and grading criteria without any relation to national tests (Gustafsson and Yang-Hansen, 2009). This led to inflation in grades, fuelled by increased competition among schools in Sweden (Vlachos, 2010). To help ensure that grading is consistent, the Education Act states that only registered teachers have the right to independently set grades in Sweden (since 2012). In cases where a teacher is not registered, decisions on grades must be made jointly with another teacher who is registered for the subject.

Time spent in learning is also a factor related to the curriculum, and its implementation in schools and has a strong influence on student performance (OECD, 2011a). This is especially relevant with regard to the study of mathematics in Sweden, where 15-year-old students have the least opportunities to learn formal mathematics compared with other OECD countries and third least opportunities to learn applied mathematics. Swedish students have among the lowest exposure to applied and formal mathematics among PISA countries (Figure 2.2). PISA shows a positive relationship between both these indicators and mathematics performance: the more students are exposed to applied and formal mathematics, the better they tend to perform in mathematics.

Box 2.1. Using assessment to drive student learning

The use of assessment and feedback can help develop a differentiated teaching environment which caters to the needs of all students. It can inform student learning, to further challenge or support students if they need more scaffolding (Dumont, Istance and Benavides, 2010). Both summative and formative assessment can contribute to producing high-quality information on student learning. Such information is integral to the learning process and provides invaluable information to stakeholders, such as teachers, parents, head teachers or policy makers.

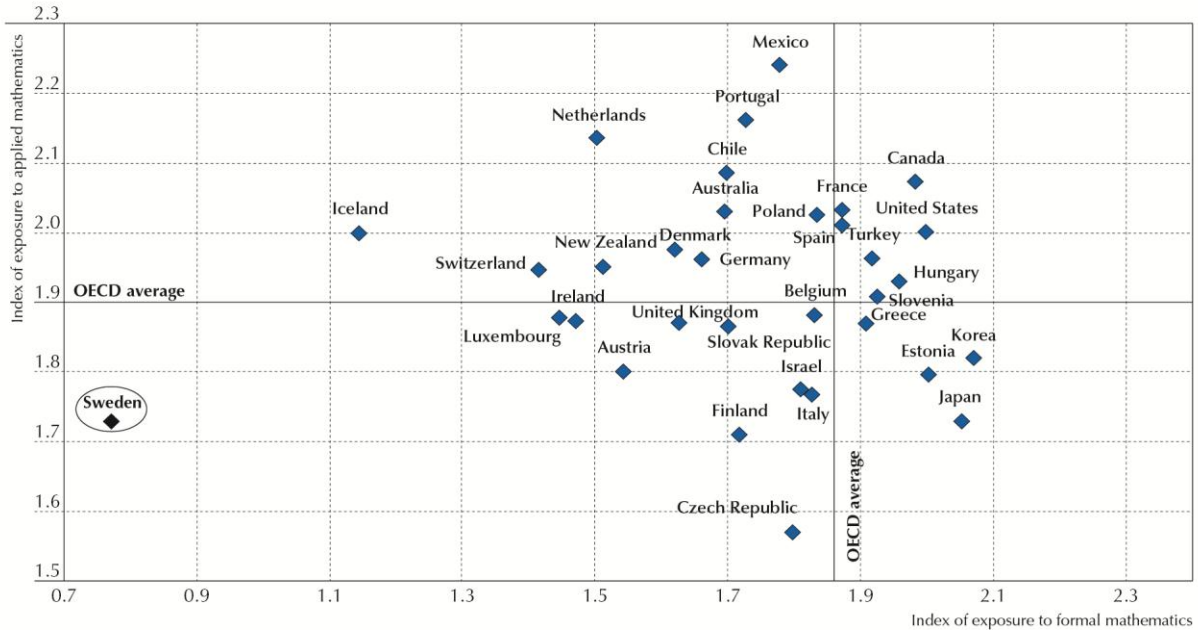
- Summative assessment summarises students' achievement at a given point, while formative assessment evaluates student progress against learning goals to set actionable goals (Harlen, 2006, cited in OECD, 2012a).
- Formative assessment is a central feature of learner-centred environments and can contribute to differentiated learning. It can provide information on what students already know to guide their learning.

Teachers in Sweden feel a need to receive professional development in assessment and grading: 26.4% of lower secondary education teachers indicated they had a high level of need for professional development in student evaluation and assessment practice (10% more than the OECD average) (OECD, 2014b). It is important to ensure that teachers are well prepared to effectively ensure formative and summative assessment of students (Nusche et al., 2011). Teachers should be able to implement and use formative assessment to understand students' learning and to plan their learning process (Dumont, Istance and Benavides, 2010) and in order to be able to identify failure early.

Source: Nusche, D. et al. (2011), *OECD Reviews of Evaluation and Assessment in Education: Sweden 2011*, OECD Reviews of Evaluation and Assessment in Education, OECD Publishing, Paris, http://dx.doi.org/10.1787/9789264116610-en; Dumont, H., D. Istance and F. Benavides (eds.) (2010), *The Nature of Learning: Using Research to Inspire Practice*, Educational Research and Innovation, OECD Publishing, Paris, http://dx.doi.org/10.1787/9789264086487-en; OECD (2014b), *TALIS 2013 Results: An International Perspective on Teaching and Learning*, TALIS, OECD Publishing, Paris, http://dx.doi.org/10.1787/9789264196261-en; OECD (2012a), *Equity and Quality in Education: Supporting Disadvantaged Students and Schools*, OECD Publishing, Paris, http://dx.doi.org/10.1787/9789264130852-en.

Again related to mathematics, the main subject assessed in PISA 2012, there appears to be less focus on content in Swedish schools than in other OECD countries. Students report lower understanding or knowledge of mathematical concepts (such as quadratic functions, exponential functions or complex numbers) than students in other OECD countries. Sweden shows a mean of less than 0.8 on the index of exposure to formal mathematics, meaning that Swedish students almost never encounter such problems in their mathematics lessons, compared to the highest performer in mathematics in PISA 2012, Shanghai-China with a mean of 2.3, which indicates that students encounter such problems in mathematics lessons sometimes or frequently.

Figure 2.2. Exposure to applied mathematics vs. exposure to formal mathematics



Source: OECD (2014a), *PISA 2012 Results: What Students Know and Can Do (Volume I, Revised edition, February 2014): Student Performance in Reading, Mathematics and Science*, PISA, OECD Publishing, Paris, http://dx.doi.org/10.1787/888932936427.

In Sweden, 60% of 15-year-old students report that they have never heard of quadratic functions, while fewer than 5% reported they know them well. This observation is also reflected in the OECD Teaching and Learning International Survey (TALIS) 2013 (OECD, 2014b), where 16.5% of teachers reported the need for more knowledge of the curriculum, more than twice their OECD counterparts (7.9%).

Other international data, such as TIMSS, that focus on students in Year 4 (under age 9.5) and Year 8 (under age 13.5) show a similar pattern. Younger students in Sweden (Year 4 and Year 8) have less than the TIMSS international average exposure to numeracy learning opportunities. For example, only 53% of Swedish students in Year 4 were taught the TIMSS mathematics topics (collaboratively with participating countries which developed forward-looking lists of topics to be taught in mathematics in Year 4), compared to 72% of students in other countries. In Year 8, Swedish students were taught 60% of the commonly taught mathematics topics, compared to 80% of the other countries that participated in the study. In particular, within the area of geometric shapes and measures, only 38% of the students in Year 4 were taught the topics identified, compared to the international average of 65%.

In addition to high quality teaching and learning, the association between instructional time in class and academic performance is acknowledged in the literature (Ottmar et al., 2014; Clark and Linn, 2003; Smith, 2002). Swedish students have fewer hours per year of instructional time in mathematics at younger ages than in other countries. While Swedish students in Year 4 have 138 hours of instructional time per year in mathematics (the average for other countries is 162), students in Year 8 have only 97 hours of instructional time per year in mathematics, the lowest amount of instructional time in mathematics among all countries that participated in the study (Mullis et al.,

2012b). The picture is similar for reading and literacy, although not as significant as in mathematics (Mullis et al., 2012a).

More generally, while Swedish students report a positive relationship with their teachers, they report lack of follow-up in some practices that ensure learning is taking place. Only 51% of students report that their teacher checks their exercise books regularly (OECD average 72%) and 55% of students report that their teachers practice similar tasks until they know that students have understood the task (OECD average 67%). Also, less than 49% of Swedish teachers refer to situations from everyday life or work to demonstrate why a problem is important (OECD average 68%) (OECD, 2014b). Evidence points towards the effectiveness of connecting learning with real-world situations rather than learning abstract concepts without seeing their practical application (Guthrie, Wigfield and Klauda, 2012).

Setting high expectations is key for student learning and for making students active participants in their learning. In Sweden, there appear to be low expectations for students to achieve high performance, also defined by the relatively low number of hours spent on mathematics learning. The previously loose curriculum, in a culture of tolerance to disciplinary and truancy issues by schools and parents, may have hindered teachers' effectiveness.

To tackle this issue, Sweden has introduced a range of measures including the 2011 curriculum. It may take time for the results of this new curriculum to be embedded throughout the system, but given the diversity of practices across schools and teachers, consolidating available knowledge and supporting schools and teachers more systematically to deliver the curriculum could help ensure that students have clear expectations of what they need to learn and a stronger motivation to achieve.

To foster collaboration and exchange of effective teaching methods among teachers in schools, *Matematiklyftet*, in-service training in mathematics, has been introduced in Swedish schools. More than 14 000 teachers across Sweden have already taken part in the programme in the first year, and over the first three years, just under half of the country's public schools will participate. Starting in 2015, teachers of Swedish can also participate in Reading Boost (*Läslyftet*, 2015-18) an in-service training in literacy. This programme, offered by the National Agency for Education, is designed to help increase students' reading comprehension and writing skills by developing and strengthening the quality of teaching. Furthermore, Science Boost has also been developed to offer in-service training for science teachers (OECD, 2015b).

In addition, in 2012, Sweden introduced a pilot scheme called Cutting-Edge Education in Years 7-9 in compulsory education. This nationwide recruitment scheme, which can take students from the entire country, aims to offer students special depth and breadth within a specific subject (or subjects). Within cutting-edge education programmes, students can study upper secondary school courses and receive grades in the subject (or subjects) which the cutting-edge education is oriented toward. For the rest of their studies, students follow regular school education. According to some preliminary evaluations, students and parents are satisfied with this programme in compulsory school (NAE, 2013c). As a pilot project, however, this programme may be focusing only on a subset of students and Years. It will be important to continue to evaluate the programme and identify factors for success of failure, to understand if it can successfully be implemented nationwide (MoER, 2015).

Further, strategies have been introduced to tackle boys' underperformance in Sweden, such as provision of training tools and programmes developed to help teachers eliminate gender stereotypes in their teaching practices. In 2013, a national information campaign was launched to encourage men to consider a career in preschool education (OECD, 2015a).

Indeed, conditions shaping the environments in which learning takes place are important (Dumont, Istance and Benavides, 2010). This refers to structural school-level conditions that affect the way in which students and teachers interact. Factors such as learning time, the curriculum, or share of instruction in the curriculum by subject, are tangible policies used across countries to improve the learning process (OECD, 2015b).

This is a key issue not only for Sweden, but for many other OECD countries. In order to ensure school improvement, many recent policies across OECD countries have focused on what and how students learn. In contexts of increased autonomy for schools, this is a particular challenge in making decisions on pedagogical resources and the curriculum, and developing policies to guide and foster schools' capacity to provide an adequate learning environment and set high expectations for all.

As part of an effort to develop more conducive learning environments that motivate students and ensure they obtain higher levels of skills, some countries have introduced comprehensive curricular reforms, such as Scotland (United Kingdom) with the broad Curriculum for Excellence (2010) (Box 2.2) or Finland's national core curriculum that serve as guiding tool to clarify expectations, as well as means to enable and manage educational change throughout the system.

Box 2.2. Scottish Curriculum for Excellence

The implementation of the Scottish Curriculum for Excellence (CfE) for 3-18 Year-olds started in 2004 and has been introduced in varied forms over the period since then. It has also been adopted as a holistic approach to school improvement, steering the values and dispositions that can motivate students to excel. While specific subjects are an essential feature of the curriculum, particularly in secondary school, the curriculum is more outcome-oriented than subject-oriented, promoting a comprehensive and inter-disciplinary approach. Given the high degree of flexibility in the curriculum in order to allow the students to find an appropriate pathway, it is crucial that all stakeholders are clear about the goals and aware of the range of opportunities. Capacity building at the local level has been crucial, and various stakeholders, such as students, parents and local authorities, are encouraged to contribute to the curriculum. For implementation, teachers are provided with numerous exemplars, in particular to support their evaluation and assessment practices. To monitor the success of the curriculum, the Scottish Survey of Literacy and Numeracy has been conducted since the introduction of the curriculum in 2004.

The CfE is based on the values that are also inscribed on the mace of the Scottish Parliament: wisdom, justice and integrity. All young people should be "successful learners, confident individuals, responsible citizens and effective contributors to society and at work". By providing structure, support and direction, the curriculum should enable students to develop these four values and to develop "skills for learning, skills for life and skills for work". The principles that teachers, schools and educators should use for the design of the curriculum emphasise challenge and enjoyment, personalisation and choice, relevance, breadth, depth, coherence and progression (Kuiper and Berkvens, 2013). The curriculum covers curriculum areas such as Mathematics, Science and Languages, and also Health and Wellbeing, Technologies and Expressive Arts.

Source: Education Scotland (2010), "What is the Curriculum for Excellence?", www.educationscotland.gov.uk/learningandteaching/thecurriculum/whatiscurriculumforexcellence/.

In Finland, a new curriculum is developed approximately every ten years, bringing together the past and future, technological innovation and traditional creativity. This national core curriculum is a framework around which local curricula are designed; the state steers it but does not prescribe in detail. Through consultation and discussion, the Finnish National Board of Education develops guidelines that provide support and strategic thinking.

Within this broad steering system, considerable decision-making power is devolved to the municipalities in Finland. Teams of qualified teachers develop much of the curriculum together at the municipal level in ways that adjust to their students. The national core curriculum contains the objectives and core contents of teaching for all school subjects, and also states the mission, values, and structure of education. It describes the conception of learning and goals for developing the learning environment, school culture and working methods. This gives the core curriculum a dual role: it is an administrative steering document, as well as a tool for teachers to develop their own pedagogical practices (Hargreaves, Halasz and Pont, 2008; Vitikka, Krokfors and Hurmerinta, 2012).

Ensure continued additional support for disadvantaged and migrant students

The highest performing education systems combine high quality and equity (OECD, 2012a). The Swedish school system is equitable overall. It starts by offering early childhood education and care (ECEC), called preschool, which is well developed and in high demand in Sweden, as 82% of mothers and 92 % of fathers are employed (Statistics Sweden, 2013). Almost 50% of 1-year-old children and 93% of 3-4 year-olds are in some kind of ECEC programme in Sweden (OECD, 2014c).

Sweden then provides compulsory education between age 7 and 16, organised in a single structure corresponding to primary and lower secondary education. It offers a comprehensive pathway for all students: the majority of all 15-year-old students in compulsory school follow the same programme or timetable with individualised support. There is no provision for student tracking at early ages or for grade repetition, unless parents specifically ask for it. The first point of selection between different educational orientations is at age 16, when students apply for upper secondary school.

In Sweden, the degree to which socio-economic status is a predictor of student performance is less strong than in other OECD countries (OECD, 2013c). The proportion of low performers in disadvantaged schools is small and there are also relatively few high performers in advantaged schools.

The concept of inclusion is embedded in the Swedish school system. There is no grade repetition, and students in compulsory school are not selected into schools based on grades or ability. Schools accept all students. The PISA index of social inclusion measures the degree to which students of different socio-economic status attend the same school or the degree to which different schools have different socio-economic profiles. PISA 2012 showed that the index of social inclusion for Sweden is third highest (86.9) among OECD countries (75.6), although there has been a slight decrease between 2003 and 2012.

The variance between schools is significantly smaller in Sweden than in other OECD countries: in Sweden the school a student attends has less impact on performance than in other OECD countries. At the same time, the differences between schools seem to be

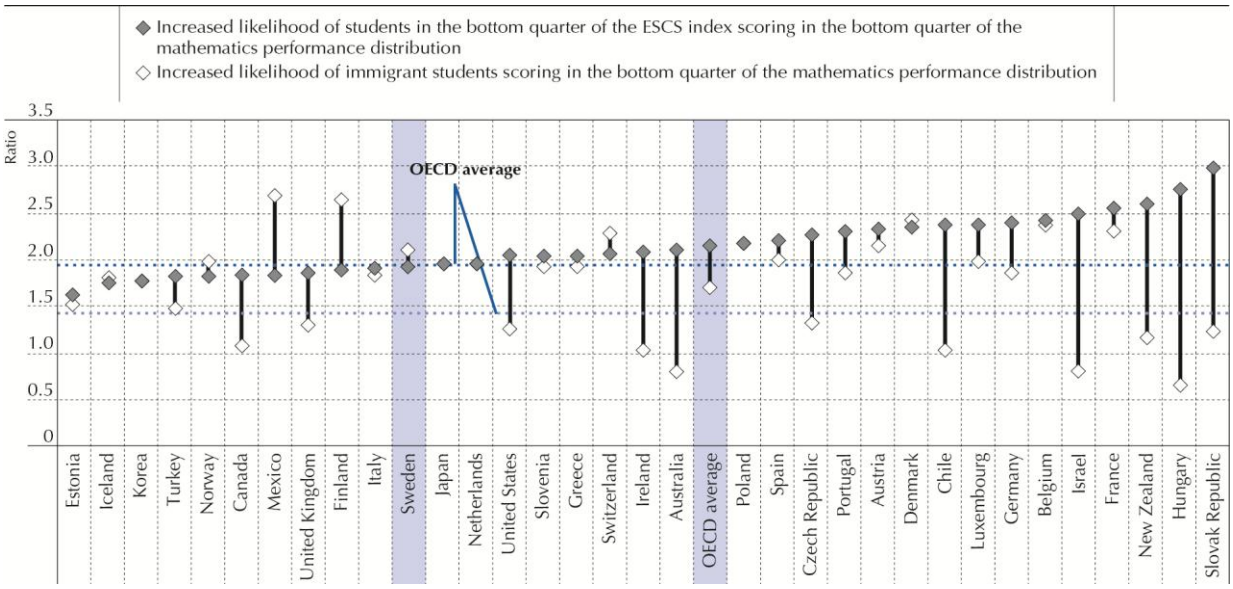
rising with respect to qualities such as students' motivation to study. Peer effects and teachers' expectations will likely increase these differences between schools, which means that which school a student attends is becoming more important (NAE, 2012).

At the same time, differences within schools are higher than the OECD average, as schools bring together students of different backgrounds and learning styles. Schools use different strategies to cope with this diversity, and Swedish teachers report using different personalised learning strategies (OECD, 2013d). Another frequently used strategy is ability grouping across classes: 57% of students are in schools with one form of grouping used for all classes, compared to 35% of students on average across OECD countries. This approach sometimes leads to groups becoming permanent (Swedish Schools Inspectorate, 2014). To continue supporting an equitable and inclusive school system, Swedish schools should enhance teachers' capacity to use these strategies effectively and provide the necessary resources. They also need to ensure that ability grouping is not used permanently, but only as a temporary solution within classrooms (OECD, 2012a).

Some students or groups tend to have lower performance than average

While there is relatively high equity in Swedish schools with regard to socio-economic status, having an immigration background has a stronger impact on students' performance in Sweden than in other OECD countries (Figure 2.3).

Figure 2.3. Relative risk of being a low performer depending on personal circumstances (2012)



Source: OECD (2014a), *PISA 2012 Results: What Students Know and Can Do (Volume I, Revised edition, February 2014): Student Performance in Reading, Mathematics and Science*, PISA, OECD Publishing, Paris, http://dx.doi.org/10.1787/9789264208780-en; OECD, PISA 2012 Database, Table II.2.4a and Table II.3.4a.

Immigration to Sweden has been high in recent years. In 2013, immigration reached 116 600 persons, up from 111 100 in 2012. This was an increase of 5 percentage points compared to 2012 (OECD, 2014d). Among Sweden's student population in 2012, 15% of students had an immigrant background, above the OECD average of 11.2%. The share of immigrant students in Sweden in 2000 was 11.7%.

However, it is important to note that the increase in the share of immigrant students had only a small impact, and cannot explain the significant decline in Sweden's overall results on PISA. Both immigrant and non-immigrant students in Sweden saw a sharp decline in performance over the past decade, and the results did not deteriorate significantly more for one group than for the other.

It is also important to note some specifics about the situation of migration in Sweden:

- In 2012, Sweden had the highest proportion of students with immigrant background among all Nordic countries (Sweden 14.5% compared to Norway 9.4%, Finland 3.3% and Denmark 8.9%) (OECD, 2013b).
- In 2012, the largest proportion of immigrants in Sweden came from Syria, Afghanistan and Somalia (OECD, 2014e). Between 2002 and 2011 the largest proportion of immigrants came from Iraq. The number of refugees in Sweden rose by 42% in 2013 (from 16 700 to 29 000). Most do not speak Swedish when they arrive.
- The proportion of immigrant students whose mothers have very low levels of education is significantly higher in Sweden than in other OECD countries, in particular among students with first-generation immigrant status (OECD, 2012b).
- Foreign-language immigrants in Sweden have very low levels of literacy proficiency, and score lower than native-born and native-language Swedes, especially due to the lack of use of Swedish language at home. Second generation students who do not speak Swedish at home manage to diminish the gap slightly (OECD, 2012b).
- Students with immigrant background scored 58 points less in mathematics performance in PISA 2012. This is among the largest differences in OECD countries (average difference of 34 points), but a decrease compared to the difference in Sweden between mathematics performance of non-immigrant and immigrant students in PISA 2003 (64 points).
- While second-generation immigrants in Sweden perform better in mathematics than first-generation immigrants, the difference (around 19 points), is higher than the OECD average (10 points) (OECD, 2013b).
- PISA data show a heavy concentration of immigrants in disadvantaged schools in Sweden: 23% of immigrant students in Sweden are in disadvantaged schools, compared to the OECD average of 15.7%.

The 8.4% of the Swedish students who are immigrants and speak another language than Swedish at home seem to be particularly disadvantaged. The score point difference between these students and non-immigrant students who speak Swedish at home (56 points) is high compared to the OECD average (43 points) (OECD, 2013b).

Sweden has already introduced several measures to support integration of immigrant students. For immigrant students, reception classes and Swedish language provision are offered. However, of the 9% of Year 9 students enrolled in Swedish as a second language in 2013, one in four students failed, and this meant that they automatically failed to qualify for national upper secondary programmes (OECD, 2015c). Sweden also provides free language tuition to all adult permanent residents. Such measures undoubtedly contribute to better language proficiency among immigrant parents, which can only be beneficial to their children. However, the quality of language provision might differ as

language courses are a municipal responsibility. Overall, one in four of those who participated in Swedish language courses dropped out, and a further 38% achieved only the lowest passing grade. Some immigrants might also only be able to attend Swedish language courses if childcare is available (OECD, 2014e).

To facilitate transition to the labour market for newly arrived immigrants, several initiatives have been introduced to encourage employers to hire migrants. For example, the Apprenticeship for New Arrivals programme compensates employers for on-the-job training costs. Another initiative, called Applied Basic Year, funds on-the-job training for new arrivals with low education (OECD, 2014d).

In Sweden, the National Agency for Education (NAE) has the task of carrying out integration efforts in the school system and supporting municipalities to build preparedness and knowledge to receive newly arrived students and offer them a good education. Several strategies have already been initiated, such as elaborating mapping material to support the school's work to plan education for newly arrived students and compose part of basic documentation for the compulsory school year in which students are placed. The NAE has also elaborated support material for evaluating students' command of the Swedish language and offers professional development for both principals and teachers. Finally, materials have been prepared in different languages to inform students and parents about school choice (MoER, 2015).

This is an important policy response, considering the turmoil in the Middle East and other regions from which Sweden receives considerable numbers of refugees and other immigrants who tend to concentrate in certain urban areas and rural schools. Apart from the undesired segregation of immigrant and non-immigrant students, there is a risk that differences in student performance among Swedish schools will grow.

International evidence on how to support disadvantaged schools and their students points to the need for a coherent and balanced curriculum that provides the basis for each student to learn to high standards. This must be combined with adequate support to help students achieve their potential (Riley and Coleman, 2011). However, in practice, there are often lower expectations for performance of disadvantaged students or low-performing schools (Gray, 2000). This is despite research showing that lower expectations have negative consequences on delivery of the curriculum, quality of instruction provided by teachers, and especially on self-esteem of students, their aspirations and their motivation to learn (Leithwood, 2010; Dumont, Istance and Benavides, 2010).

In Germany, the National Action Plan on Integration (2011) aims to integrate people with immigrant background into Germany society. Through the definition of strategic goals, structural change is intended to create the foundations for lasting and sustainable integration in Germany, involving several ministries and levels of governance. At the same time, concrete projects and programmes are supported by the federal government. One strategic goal is to facilitate early access to learning, care and education in day-care facilities or day nurseries for children. The federal government supports difficult-to-reach parents in the organisation of their children's educational paths with its model project, Educational Bridges – the Qualification of Parents for Better Educational Opportunities in Immigrant Families.

Another strategic focus is on reducing structural access barriers by providing education and training to facilitate access for a greater number of children with an immigrant background. The federal government supports the programme called Tailor-

made Placement of Apprentices in Companies Willing to Apprentice, in which placement officers of the Chambers and other industry organisations provide specific targeted support to both companies and young people, particularly those with an immigrant background, in their efforts to conclude a training and apprenticeship contract (*Die Bundesregierung*, 2012; OECD, 2015b).

In Ireland, several measures have been adopted to raise the results of low performers, also to support an increasing number of migrants. The Delivering Equality of Opportunity in Schools (DEIS) programme was developed in 2005 as an on-going national comprehensive policy for educational inclusion. It included a standardised system to identify each school's level of socio-economic disadvantage (based on its community) and an integrated School Support Programme to provide schools and school clusters or communities with additional resources and support, depending on their level of disadvantage. Evaluation of DEIS schools in 2007 and in 2010 found overall improvement in reading and mathematics in both urban and rural schools, with an increase in completion rates from 68.2% for 2001-07 cohorts to 80.1% for 2006-12 cohorts. Given its impact, the DEIS school programme was consolidated into a national literacy and numeracy programme (OECD, 2015b).

For Sweden, continued action at the school level is essential to maintain and enhance existing equity and to further foster equity, in particular with respect to immigrant students and their integration. This can require continuing and improving the current approach: enhancing strategies to boost Swedish language skills, providing quality reception classes, tracking students' performance and ensuring early intervention, providing career guidance in schools to facilitate transition to the labour market and tackling dropout. A more strategic approach towards integration at the national level could ensure co-ordination among the different actors (OECD, 2014e).

Current system-level policies and practices can hamper equity and quality

Uneven education resources do not reach those who need them most

High investment in education

Education represents more than 13% of Sweden's total public expenditure. Sweden's annual expenditure per student is among the highest across OECD countries, more than USD 10 547 (converted using PPPs) per student for primary through secondary (OECD, 2014c). The majority of this investment is public (97%, compared to the OECD average of 84%), with most education being publicly funded, whether delivered through public or independent schools. This proportion is among the highest across OECD countries.

However, it has been demonstrated that after a certain level of expenditure per capita, it is not the amount of resources that makes a difference, but how the resources are distributed and used. Many researchers have shown than more variation in performance can be accounted for by the quality of resources and how they are used than by the quantity of resources (Rivkin, Hanushek and Kain, 2005; Murillo and Roman, 2011; Hageland, Raaum and Salvanes, 2012; Nicoletti and Rabe, 2012). In Sweden, expenditure in education is above average, but the current approach to allocation and distribution of resources does not seem to be delivering better education results. It would require revision to be more effective.

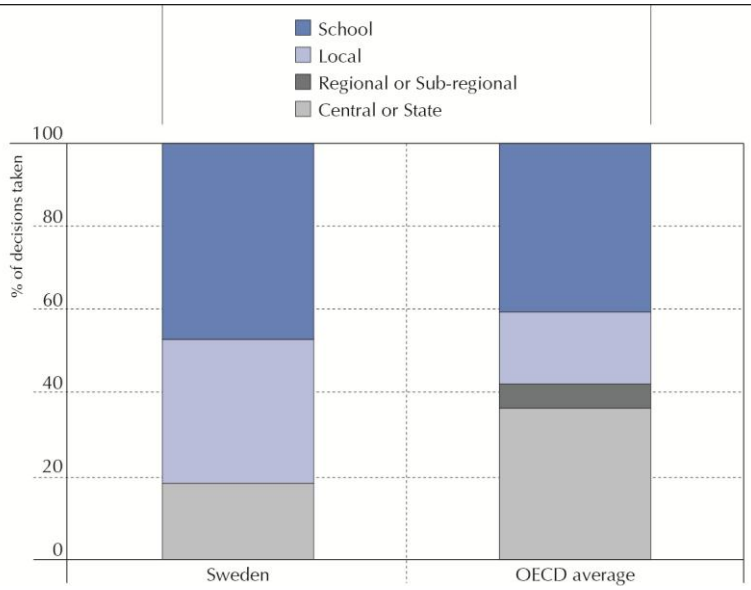
School funding decentralised to municipalities

Schools receive their funding from municipal grants from the student's home municipality and from state grants. Funding comes from local tax revenues and a national grant linked to an equalisation system. Each municipality receives a concrete amount that it distributes across different public services, such as elder care, social services and education.

The equalisation approach aims to ensure that municipalities/counties deliver equal levels of services across Sweden, irrespective of the income of the municipality's residents. For education, it means that every student should have the same opportunity for a good quality education. Equalisation takes into account that demand may vary according to population structure, and that the cost of delivering the service may vary, depending on residence, proportion of students with foreign background and/or low socio-economic status. For example, in rural municipalities, education may be more expensive to provide due to greater distances and the smaller number of students in schools (MoER, 2008).

While state grants use this equalisation approach to ensure that funding responds to local needs, funding from the state grant is not earmarked specifically for education. Municipalities have their own way of allocating resources across the public services they deliver and then between schools, taking into consideration that schools and students have differing needs. Within municipalities, this allocation can be more or less decentralised. Indeed, municipalities in Sweden have much autonomy (Figure 2.4.), as they decide how resources will be distributed between their schools. Schools also have a high degree of resource autonomy.

Figure 2.4. Percentage of decisions taken in public lower secondary schools at each level of government, 2011



Source: OECD (2011b), *Education at a Glance 2011: OECD Indicators*, OECD Publishing, Paris, http://dx.doi.org/10.1787/eag-2011-en.

To support delivery of education to reach all Swedish students in compulsory education, the Education Act requires that all schools across Sweden be able to respond to

the needs of all students, taking into consideration that some may need additional support. This is the national approach to ensuring equivalence, considered a driver in the Education Act: "It is the principal organiser who is responsible for the education in the organiser's schools being equivalent" (Swedish National Audit Office, 2013). To this end, municipalities' resource allocation should be adapted to students' differing needs and preconditions.

With the large number of diverse municipalities with autonomy to fund and deliver education, the equalisation principle is meant to provide sufficient resources to be used as best suited to each municipality's local needs. However, in practice this is a challenging principle to sustain under the current funding approach, which is decentralised and driven by school choice that includes independent schools. There is simply no clear strategy to deliver at the municipal level.

Municipal approaches to resource allocation vary greatly

The evidence shows the distribution of school resources as well as the capacity to use these resources varies among municipalities. The evidence also suggests these differences partially originate from the decentralisation reforms of the early 1990s. One report showed that the decentralisation reforms were not terribly successful in a number of areas, especially in enhancing student performance (SOU, 2014:5). Among the issues highlighted is the lack of support to municipalities and evaluation of the impact of reforms. The NAE did not support schools and teachers, building on the principle that the reform was designed to provide autonomy so that education providers could find the most suitable ways to deliver education.

In addition, as explained earlier, the decentralisation process was coupled with the introduction of a loose curriculum, which some considered abstract and difficult for teachers to implement. This lack of clarity and support to schools by education providers may have led to greater diversity among municipalities in delivery of education.

Another recent report, by the NAE (2013b) analysing the effectiveness of municipal resource allocations to schools shed some light on the reality of funding of Swedish schools. This study aimed to assess whether the concept of equivalence in funding is being applied in practice across municipalities. It looked at whether the conditions and background of schools were sufficiently considered in funding arrangements to ensure that resources are available to respond to the Swedish concept of equity in education. The study showed some clear trends:

- There are big differences between municipalities in the cost per child in preschool and the cost per student in compulsory school (NAE, 2012). Even with the same resource allocation model, allocations to preschools and schools would differ greatly, as municipalities have very different budgets to allocate.
- Municipalities initially fund schools based on the number of students. Additional resources are then provided depending on socio-economic or migrant background or for students in need of special attention. The proportion of resources allocated according to need (based on general criteria or individual needs assessment) is relatively small. For compulsory education, six out of ten municipalities allocate a maximum of 10% of resources according to need.
- Municipalities with lower socio-economic background population or students do allocate more resources to schools with less favourable preconditions.

- Follow-up or evaluation of the use of resources is not common across municipalities, and when it is done it has more impact on the following year's allocation. The more this process is used, the more effective it appears to be.

This study concluded that support available for more challenging schools appears to be insufficient, according to principals' responses and to the data, without enough differentiation across schools. It also concluded that quality evaluation and more follow-up are required, and that it is important to provide more support for municipalities to allocate resources, so that tools, models of resource allocation and clear guidance do not need to be reinvented in each municipality (NAE, 2013b).

Other studies have examined allocation of education resources and their impact. A recent report by the Swedish National Audit Office (2015) analysed national school grants and subsidies directed to equity to see if they deliver favourable results on equity and equivalence. The study concluded that the grants do not reach those who need them most because schools do not take advantage of these grants, and this generates even more inequities. An earlier study by the NAE (2011) came to the same conclusion.

These findings coincide with anecdotal evidence gathered during the OECD review visit, where the differences across municipalities were evident in terms of resources and capacity. The review team also saw very positive use of resources from a national grant to support a school with a large proportion of migrant students. But what is important is whether this approach is *ad hoc* in selected schools or municipalities or is actually reaching the schools in need it is designed to target.

At the same time, there appears to be very little clarity on the range of funding approaches possible across Sweden. Co-operation between municipalities appears limited in the field of education policy and funding approaches. The Swedish Association of Local Authorities and Regions represents all 290 municipalities and could play a major role in supporting funding co-ordination or support. One of its roles is to lobby for maximum autonomy for local authorities, but evidence suggests that it organises few activities supporting exchange of experience or common reflection on educational strategies and funding (MoER, 2015).

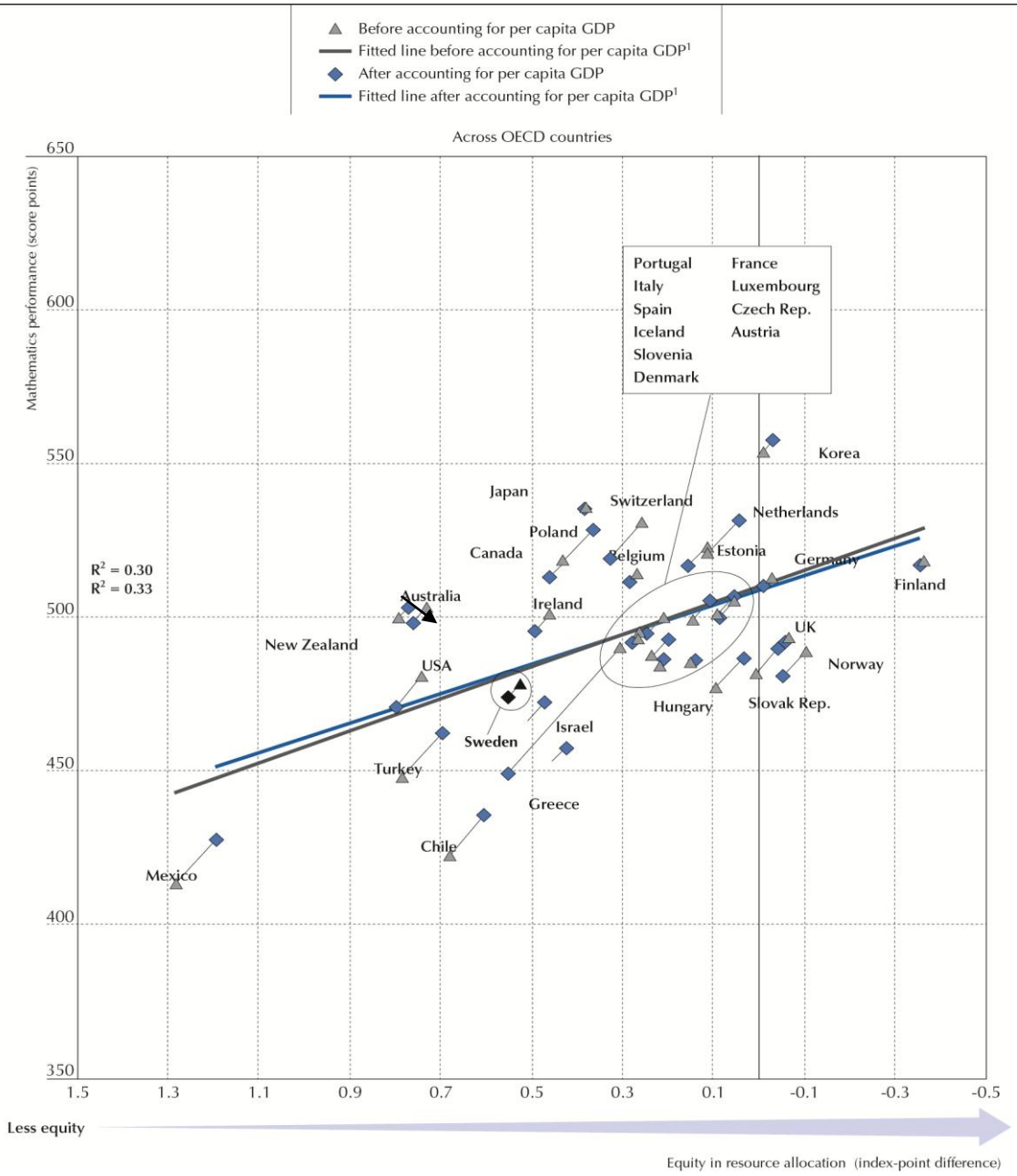
Is resource allocation reaching its objectives?

Different allocation of resources towards schools is associated with student performance (Figure 2.5). Even after accounting for per capita GDP, 30% of the variation in mathematics performance across OECD countries can be explained by the level of similarities in principals' reports on school's educational resources between socio-economically advantaged and disadvantaged schools.[1] High-performing countries tend to allocate resources more equitably across socio-economically advantaged and disadvantaged schools (OECD, 2014f).

On average across OECD countries, schools with more socio-economically disadvantaged students tend to have lower-quality resources than schools with more advantaged students. In Sweden, according to PISA, approximately 18% of students attended disadvantaged schools, 59% attend socio-economically average schools and 23% attend advantaged schools. Higher inequity in resource allocation can also mean that schools with more disadvantaged students can have higher probabilities of teacher shortages or inadequate educational materials and physical infrastructure than advantaged schools. In Sweden, principals in socio-economically disadvantaged schools are more likely to report that instruction is hindered by a shortage or inadequacy of educational

resources than principals in advantaged schools. Schools with many socio-economically disadvantaged students are more likely to suffer from teacher shortages in Sweden than schools with a larger proportion of advantaged students.

Figure 2.5. Allocation of educational resources and mathematics performance, PISA 2012



Source: OECD (2013a), Programme for International Student Assessment (PISA), *OECD Education Statistics* (database), Table IV.1.3., http://dx.doi.org/10.1787/data-00365-en.

Sweden presents higher inequity in resource allocation than a number of OECD countries, although Sweden has a number of policies and approaches directed to ensuring

equity in the delivery of education, including the equalisation approach, free provision of education and a number of additional national grants and municipal support devoted to equity and integration of migrants into the system.

Funding strategies in Sweden need to be looked at within the broader school system. The Swedish school system has moved to one of school choice and, with the introduction of publicly funded independent schools, to competition between schools. School choice may hamper equity while not necessarily raising results (OECD, 2012a). In Sweden, different evidence shows that school choice has possibly contributed to increased performance gaps between schools and to decreased equity, while not necessarily raising outcomes (Wiborg, 2011). While this so far does not seem to have had a strong impact, it is important to keep in mind as background to the funding arrangements.

At the same time, there does not appear to be sufficient follow-up or evaluation of decentralisation and autonomy in resource allocation to ensure that they are meeting the objectives of delivering education and contributing to equity. The NAE prepares valuable reports, and other institutions, including the Swedish National Audit Office, have reviewed many key issues underpinning education provision, but these reports have not been brought together in a coherent manner.

The background report prepared for this review clarifies that there is no regular, systematic national approach to monitoring the use of resources at different levels of the school system and that this is due to current autonomy in distribution of responsibilities (MoER, 2015).

A number of initiatives however have recently been introduced to respond to this situation. While maintaining the principle of decentralisation and autonomy, the Swedish government has introduced an amendment to the Education Act to clarify that municipalities shall allocate resources within the school system according to children's and students' different preconditions and needs (July 2014). The aim appears to be to indirectly make municipalities responsible for this allocation and to signal to the Schools Inspectorate to include this concept in their evaluation of municipalities. This can then strengthen self-evaluation by schools and municipalities, considered to be the compulsory mechanism for resource management.

At the same time, The Swedish Association of Local Authorities and Regions has prepared a handbook for municipalities on how to distribute and differentiate resources to schools based on their student composition (SALAR, 2014). It provides technical advice on how to develop a socio-economic allocation model while emphasising the different components to be included.

Yet, there does not appear to be any clear approach to accountability for use of resources in relation to objectives. Equality of opportunity across the country depends on a consensus between central and local education authorities and on the autonomy granted to schools. The few evaluations carried out recently suggest that it may be advisable for the national government to maintain some responsibility over funding mechanisms, either through a minimal degree of earmarked funding or through central regulation of local expenditures. Furthermore, national institutions, such as the NAE in combination with the Swedish Schools Inspectorate, could have greater responsibility for evaluating the impact of resource use more systematically. In addition, municipalities can receive greater support and strengthen collaboration to find effective ways to ensure education delivery or use targeted funding.

School funding does not guarantee equal learning opportunities across and within Swedish schools

Evidence shows that governance and funding approaches can steer education systems towards higher performance. High-performing countries build on their institutions and take into account the different governance levels, their dynamics and resources to drive improvement across the system and schools. They set clear objectives for their education system, ensure that there are the right institutions to deliver education, engage stakeholders in the process, and find the right balance between central and local direction, while at the same time ensuring that financial, material and human resources are aligned to the objectives. To achieve higher education performance, governance strategies and funding need to be aligned (OECD, 2011a; OECD, 2015b).

Evidence on student performance shows that efficient investment and distribution of resources, according to countries' needs, priorities and capacities, are important at both system and institutional levels (OECD, 2012b; OECD, 2012c; OECD, 2013e). Clear allocation of resources is a particularly important and often neglected element in the policy-making process (Grubb, 2009).

International practices show that high-performing education systems tend to allocate resources more equitably across socio-economically advantaged and disadvantaged schools (OECD, 2014g). Overall, there are different approaches to how schools are funded. Funding varies in terms of how resources are directed to:

- different levels of administration (e.g. central, regional or local level)
- different types of resources (human resources, physical resources, targeted programmes)
- different levels of the school system (primary, secondary, etc.)
- individual schools (public and independent) (OECD, 2014f).

Sweden is not alone. Policy makers internationally are faced with the challenge of guiding and funding education for effectiveness and efficiency. In education systems which are increasingly decentralised to regional or local levels and have greater accountability for outcomes, a key challenge is assuring alignment and consistency in governance and funding approaches to guide their entire systems towards improving outcomes. Countries indicate that their main challenges in funding include lack of transparency and consistency in funding, as well as the need to optimise resources to allocate funds where they can make the most difference.

At the same time, different governance approaches lead to different funding approaches. A group of countries of relevance to Sweden are those that share similar a governance approach, those that have a central ministry of education which guides the education system, while education is delivered by municipalities or by municipal-level authorities. Local authorities might have either large responsibility for delivering education services, as in Chile, Japan, Korea and Poland, or overall responsibility, as in the Nordic countries (Denmark, Finland, Iceland, Norway and Sweden). Another relevant group is countries which have national steering with school autonomy to deliver education, such as Ireland, the Netherlands and New Zealand.

Countries use different types of funding approaches to finance education (European Commission/EACEA, 2014; Fazekas, 2012; Falch and Oosterbeek, 2011). Among the different tools, there can be state grants or subsidies allocated to different levels of

government or regional or local tax revenues. State transfers may be delivered as a lump sum to be distributed at the discretion of sublevel authorities or earmarked for a certain purposes (e.g. for special education programmes or disadvantaged groups) (Falch and Oosterbeek, 2011).

Where the state distributes funds to sublevels or schools, this may happen via historic funding, administrative discretion, bidding or using a formula. While historic funding uses the preceding year's grant to calculate the necessary funding (typically adjusted for inflation), administrative discretion refers to an authority which distributes money based on its own discretion. Formula funding is the most widely used option, and allows for the transparent inclusion of different variables (Box 2.3.).

Box 2.3. Formula funding

One common way of funding schools is using a mathematical formula containing different components. This is the most popular approach among EU28 countries (European Commission/EACEA, 2014), and different funding formulae are also used at national or subnational level by a number of non-EU OECD countries such as Australia, Canada, New Zealand and the United States (Fazekas, 2012). The formula design has been moving away from simple calculations based on student numbers towards funding formulae that weigh different variables, aiming to fulfil policy goals such as student needs, curricula and varying school costs (Ross and Levačić, 1999). Overall, four groups of variables are discernible: (1) student numbers and grade level (the basic and most common factor in formulae); (2) student needs; (3) curriculum or educational programme (*e.g.* general or vocational); and (4) school characteristics.

If desired, formulae may naturally incorporate differing coefficients for public and independent schools. The impact of formula funding depends on:

- The degree of coverage (i.e. the share of funding allocated through the formula): This also concerns targeted programmes outside the formula (e.g. for disadvantaged students), which are often linked to accountability mechanisms. Generally, education systems do not allocate their entire funding through a formula.
- The degree of school autonomy: Formula funds may also be earmarked, which affects school autonomy.
- The existence of an education quasi-market where schools compete for students in order to obtain funding.

Equity and efficiency, as well as adequacy, have become important evaluation criteria for the success of implemented formulae. It should be noted that: (1) it is crucial to have well-designed formulae taking into account national and/or regional circumstances, and (2) only when the allocated money is spent according to the initial planning will formula funding reach the designated recipients. For this, accountability mechanisms need to be put in place.

Sources: European Commission/EACEA/Eurydice (2014), "Financing Schools in Europe: Mechanisms, Methods and Criteria in Public Funding", Eurydice Report, Publications Office of the European Union, Luxembourg; Fazekas, M. (2012), "School funding formulas - Review of Main Characteristics and Impact", *OECD Education Working Paper*, No. 74, OECD Publishing, Paris, http://dx.doi.org/10.1787/5k993xw27cd3-en; Ross, K. N. and R. Levačić (eds.) (1999), *Needs-based Resource Allocation in Education, Via Formula Funding to Schools*, International Institute for Educational Planning, UNESCO, Paris.

A recent survey from 23 countries on the distribution of funding formulas showed that the most common approach across selected OECD countries is to base formulas on some measure of enrolled students and/or specific characteristics of enrolled students, with other countries indicating additional funding on the basis of lower-income students or student disabilities. Among the different approaches that countries have adopted:

- In the Flemish Community of Belgium, the formula allocates a portion of total funding on the basis of four socio-economic indicators: the mother's level of

education, the student's qualification for a school allowance, the language spoken at home and the living environment of the student.

- In Finland, allocations vary initially on the basis of education level and type and can also vary according to residential location. For example, in ISCED levels 1-2, increments to basic funding are also based on a municipality being bilingual and on the number of 6-15 year-olds who speak Swedish and of 6-15 year-olds whose mother tongue is not Finnish or Swedish.

In the Netherlands, schools receive equal public funding according to the number of students (except for schools fully funded from private sources), as long as they meet certain requirements. Targeted funding provides additional resources to schools. The allocation of budgets varies depending on the level of education but often has a fixed part and a larger variable part:

- ISCED level 1: The allocated budget has a relatively small fixed component (5-10%) for school management and a large component based on student count, corrected for the share of students from low-income households and students with disabilities.
- ISCED levels 2/3 (General): The allocated budget has a fixed component based on the composition of the personnel and a variable component based on student count, corrected for the type of school in secondary education.
- ISCED levels 2 and 3 (Vocational): Every school receives funding directly from the government. This is based on a "T minus 2" model. Every school receives base funding, determined by how many students it had two years ago. This smoothing mechanism provides stability in financial planning. A school will receive 80% when a student enrols for training and a bonus payment of 20% per student successfully completing the course. Schools also receive around 10% of their total student budget for infrastructure (buildings etc.). While the majority of a school's income will be derived from providing training, it will also have income streams, to varying degrees, from adult education and continuing vocational education and training.

Schools receive block grants for staffing and operating costs based on their student population, and school boards can distribute block grants as needed. Schools with students from disadvantaged socio-economic backgrounds, those with special education needs, or other specific student populations can receive additional funding. Schools can also receive additional funding from municipalities for specific educational purposes (such as for students at risk of dropping out of education). Other sources of funding for schools include voluntary contributions from parents or businesses.

In 2012, the Dutch government introduced performance-based budgeting in secondary vocational education and in tertiary education. With the aim of boosting performance of students, teachers and school leaders, performance-based budgeting will provide schools with additional funding if they reduce dropout rates, while low-performing schools will receive less funding (OECD, 2014h).

Australia recently underwent a process to modify its school funding approach. School funding had lacked transparency and coherence, and the outcomes of numerous studies had shown the difficulty in determining how individual schools were funded. Expenditure on educational institutions as a percentage of GDP (for all educational levels combined) was below the OECD average, with a higher share from private sources than the OECD

average. While this is not the case for Sweden, the review process and final legislation can be relevant.

A new funding model was developed following an independent Review of Funding for Schooling (2011) commissioned by the Australian Government. The review made a number of recommendations, including implementing needs-based funding independent of sectorial difference and targeting resources to support the most disadvantaged students. As a result, a reform of the Australian Education Act in 2013 introduced a new funding model. Recurrent funding is determined on the same basis for government and non-government schools, with reference to a Schooling Resource Standard. For non-government schools, their base funding is discounted, based on the capacity of the school community to contribute to the cost of operating their school. In addition, all schools are entitled to specific loadings (additional funds) that address identified student and school needs. These loadings are targeted at students from low socio-economic backgrounds, Aboriginal and Torres Strait Islander students, students with limited English skills and students with a disability, as well as at small schools and schools in regional and remote areas (OECD, 2015b).

England also underwent a school funding reform in 2013/14 that aims to simplify the funding system and improve transparency and the quality of education choices. The reform tries to achieve more consistency and equivalence in allocations to schools and to make the funding system more student-driven. In addition to the general fund, the Pupil Premium programme (2011) aims to reduce inequities between students through additional school funding to support disadvantaged students and close attainment gaps. The premium of GBP 900 per disadvantaged student targets students who have benefited from free school meals at any point in the last six years. Schools decide how to use this funding. The overall programme funding reached GBP 1.875 billion in 2013/14 (OECD, 2015b).

All of these countries have concrete approaches to school and student funding that are stipulated in a law or a national guiding instrument. Some of them have evaluation approaches to ensure that the funding is allocated and used to fit its purpose.

For Sweden, there is no clarity on the approach to allocating resources effectively. Overall, it appears that the current system, which combines decentralisation and liberalisation, has not been effective in improving results, as evidenced by the PISA decline. But it is not clear whether this has been due to greater autonomy, ineffective resource distribution or other reasons. What is clear is that autonomy and liberalisation have not been matched with investing sufficient resources in the teaching profession and providing clearer guidance to municipalities and others engaged in education.

As a result, there appears to be an unequal and unclear distribution of resources that could be hampering progress in education across Sweden, as is it not delivering on its equity mandate and student results are not improving. For success in education, it is important to ensure that appropriate resources reach all schools and students. There are different options to do this, depending on governance structures and the level of autonomy and support for schools in the system. In more centralised systems, this approach can be adopted and steered nationally. In a decentralised and autonomous environment, as in Sweden, a more systemic approach to the allocation of resources for schools could contribute to deliver high-quality education, coupled with clear evaluation of impact of the resources and support to ensure this can happen.

Funding or resource allocation needs to be considered within the broader education framework. For Sweden, this would require greater clarity in funding approaches that clearly reach those that need the funding most, coupled with strong guidance, support and evaluation to ensure that all schools offer similar educational opportunities, independent of students' place of residence or socio-economic background.

Balance school choice arrangements to prevent segregation

School choice practices are common in Sweden

As noted earlier, in addition to devolution of responsibilities to municipalities, a major reform in Sweden in the early 1990s was the introduction of school choice in compulsory school for students and parents. The motivation for the reform was to raise quality of schools through school choice and school competition, and to respond to concerns about the need to maintain social inclusion and avoid segregation of the student population in schools.

In theory, school choice should enable all students, irrespective of background, to choose which school they would like to attend. However, school choice poses risks that can exacerbate inequities and segregation. PISA 2012 shows that systems with low levels of competition among schools often have high levels of social inclusion, meaning that students from diverse backgrounds attend the same schools. In contrast, in systems where parents can choose schools, and schools compete for enrolment, schools are often more socially segregated.

In Sweden, school choice arrangements follow a particular approach. Students are first allocated to a school based on geographical criteria. Parents and students then can choose to stay in the school the student has been assigned to or choose another public or independent school if places are available. In primary and lower secondary schools in Sweden, no selective criteria for admission are applied other than first come, first served (MoER, 2015).

The independent schools (publicly funded private schools) introduced in the 1990s to complement school choice and decentralisation must follow the national curriculum and are not allowed to charge extra fees. In Sweden, 86% of the student population attends public schools and 14% attends independent schools, a distribution similar to that in other OECD countries (84% public school, 14% government-dependent schools, 4% private schools) (OECD, 2013e). Public funding for independent schools is provided through a voucher system. Students are allocated a certain amount, decided by municipalities (MoER, 2015).

With this move to a larger education market Sweden has seen an increase in the number of independent schools from around 60 in 1991 (Wiborg, 2011), to 792 in 2014 (MoER, 2015), with more increase on upper secondary level (Kuiper and Berkvens, 2013). In 2012, school principals reported that 55% of students were in lower secondary schools that compete with two or more schools (compared to 61% in other OECD countries). This proportion is higher in upper secondary school, where principals reported that 93% of students were in schools that competed with two or more schools (compared to 67% in other OECD countries).

Impact of school choice on performance is not clear

Several studies have investigated whether the introduction of school choice – and the resulting competition among schools – has contributed to raising the quality of schools in Sweden. The concept underlying these empirical investigations is that competition from independent schools benefits all schools, as it gives them a strong incentive to boost efficiency (Lindbom, 2010).

Several Swedish studies reviewed the impact of the growing number of independent schools on the quality of education in municipal schools and concluded that the establishment of independent schools in a municipality has a positive impact on the results achieved by students in the municipal schools. However, the relative advantage associated with establishing independent schools might abate over time, such as in Denmark where independent schools do not perform better than public schools and where free school choice was introduced in 1860 (Lindbom, 2010). Wondratschek, Edmark and Froehlich (2014) conclude that school choice had a very small positive effect on short term student performance, but "virtually zero effects on longer-term outcomes such as university education or employment".

The data from PISA 2012 shows that across countries and economies, performance is unrelated to whether or not schools have to compete for students. In systems where almost all 15-year-olds attend schools that compete for enrolment, average performance is similar to that in systems where school competition is the exception. Furthermore, there are no differences in overall performance related to the extent of private schooling within a country (OECD, 2013e).

In Sweden, school competition and the type of school have no positive impact on mathematics performance. Students in public schools perform in mathematics, on average, 2 points better than their peers in independent (private) schools, after accounting for the PISA index of economic, social and cultural status of students and schools. Also, students in schools with no competition perform in mathematics, on average, 2 points better than students in schools that compete with one or more schools, after accounting for economic, social and cultural status of student and schools.

These results support international findings that school choice does not necessarily improve performance. It would be necessary to further evaluate the impact of school choice at the municipal and national level, building on PISA data and other relevant indicators. It is important to evaluate the integration of independent schools into municipal planning for delivery of education, so that education can be effectively and equally delivered to all students, with a long-term perspective. It is also necessary to understand the impact of school choice on other factors, such as segregation.

School choice can exacerbate inequities

Although according to PISA 2012 the index of academic inclusion in Sweden (compiled by the level of variation in mathematics performance between and within schools) is relatively high, it has decreased more than the OECD average between 2003 and 2012. These findings are in line with evidence from a number of studies that show that school choice in the Swedish system has augmented social and ethnic segregation, particularly in relation to schools in deprived areas (Wiborg, 2011), and that it has increased between-school variation of grades (Östh, Andersson and Malmberg, 2012).

Söderström and Uusitalo (2005) looked at an open enrolment reform in Stockholm and concluded that the composition of students across schools has changed, as children

are now much more segregated by ability. Segregation between migrant and native students has also increased since 2000. Boehlmark and Lindahl (2007) looked at the voucher system in Sweden and found more segregation for migrant students since the reform, as parents with more education tend to choose independent schools for their children.

Some evidence points out that there can be other reasons than school choice for segregation (Lindbom, 2010). Lindbom and Almgren (2007) argue that only a tiny proportion of increased school segregation is attributed to school choice, that the main increase in school segregation was caused by rising residential segregation during the same period. They find, however, that certain types of independent schools might have a segregating impact, but the patterns are complex and vary in different cities (Lindbom, 2010).

Availability or access to information is also a factor in school choice. Although Sweden provides detailed information about available schools to parents (OECD, 2005; Nusche et al., 2011), some parents are less able than others to access the information. Less affluent parents or parents from minorities may exercise choice less because they have less access to information or lower-quality information (OECD, 2012a). Information is a key component in school choice, and it is essential to collect and analyse available information to make an optimal decision.

Parents might also choose certain schools for reasons other than academic achievement. On the list of 11 possible criteria given to parents as part of the PISA 2012 parents' questionnaire, one is directly related to the quality of teaching and learning: "The academic achievements of students in the school are high." Only a minority of parents rated this as very important (except in Korea, where 50% of parents did so). Some parents gave more weight to other criteria, such as the sports and music activities offered or the facilities of the school. If parents do not prioritise high academic achievement in choosing a school, it is not surprising that school competition for attracting students is not strongly associated with performance (OECD, 2014i).

Research also shows that parents prefer schools with populations that are ethnically and socio-economically similar to their own family. Parents might choose a certain school because of culture capital accumulation, as students will meet peers from advanced backgrounds (Musset, 2012).

PISA showed that socio-economically disadvantaged parents tend to choose their children's school as much on the basis of cost-related factors as on the quality of instruction (OECD, 2012d). This is supported by Östh, Andersson and Malberg (2012), who find that students from families in Sweden with social assistance and from foreign-born families travel shorter distances, except if the parents are highly educated.

It is important for Sweden to ensure that school choice arrangements do not hamper equity. School choice arrangements may also be aligned with application of selective academic and income criteria. This may aggravate school composition segmentation. In particular, oversubscribed schools tend to hand-pick their students and crowd out disadvantaged students and students with low performance. Therefore, the criteria to enrol in a school should be the same for all students, based on proximity and presence of siblings and on lottery systems or formulas to achieve a heterogeneous mix of students (Musset, 2012; OECD, 2012a).

An example of the impact of this selective approach comes from a school district in Stockholm that changed the admission system for public upper secondary schools. The

intention was to improve equity, as the city is segregated into neighbourhoods, by making it possible for high achievers from all over the city to attend the best schools in the high-income areas. Whereas students are guaranteed a place in the school nearest to their home, since 2000, admission is based on students' grades. Söderstrom and Uusitalo, (2010) showed that this can result in a change in the composition of students across schools, with children now much more segregated by ability, but also by socio-economic status and migrant status (Musset, 2012).

Options to support school choice with equity

Evidence points to a range of complementary options to ensure that school choice does not hamper equity while supporting higher performance.

There is a need to manage student intake according to socio-economic status and non-selective intake criteria. Different international experiences have demonstrated positive impact. A study of the Metco school-choice project in Boston that integrates mostly low-income children from minority groups into higher-income school districts in Boston suburbs concluded that there are no negative peer effects for higher-achieving students, while it found an increase in Metco students' achievement (Angrist and Lang, 2004).

In the Flemish Community of Belgium, a system with a high degree of school choice, there have been different efforts to mitigate its negative impact on segregation. Parents and students get to choose up to four schools from a list of schools in their geographical area. The Inter-Network Enrolment Commission, which steers the selection process, allocates students according to their priorities, and weighted geographical and educational criteria. It awards 80% of the places in accordance with the ranking, while ensuring that the remaining places are awarded to students from disadvantaged primary schools (Musset, 2012). In Chile, since 2009, government-dependent private schools cannot select students based on academic or socio-economic criteria until the end of primary education (Brandt, 2010).

School choice is common in the Netherlands, with control applied at the local level to mitigate imbalances in school composition or weighted student funding to support greater social diversity in schools. In Nijmegen, a central subscription system to assign students exists for primary schools, to reach a share of 30% of disadvantaged students in each school. All the primary schools have agreed on a central subscription system, based on the distribution of students in different categories. In the event of oversubscription, priority is given to siblings and children who live nearby. In order to reach the required balance, subsequent priority is given to either advantaged or disadvantaged students by a lottery system (Musset, 2012). The National Knowledge Centre for Mixed Schools (*Kenniscentrum Gemengde Scholen*) produces knowledge and influences work on school choice. This centre also provides procedures for school choice and information on the topic to parents (OECD, 2015b).

Providing information on schools to support parents in choosing schools is another option that can contribute to better outcomes. Many different countries have been making information available publicly on school results through different platforms. What is important is that information materials are prepared and disseminated to students and parents in different languages and are accessible to parents with limited literacy. In Sweden, a web-based information system called SIRIS includes both quantitative and qualitative data. SIRIS has been publicly available since 2001, and it is said to have quickly brought about a huge increase in access to educational information. It has been developed by engaging various stakeholders and also provides analytical help in

interpreting data (OECD, 2005). However, the information is available only in Swedish and is hard to access for parents with low literacy skills.

Universal versus targeted school vouchers

To support school choice in Sweden, public funding follows the students whether they are enrolled in a public school or an independent school (MoER, 2015). Vouchers available for all students can help to expand the choice of schools available to parents and promote competition among schools. Vouchers that target only disadvantaged students can help improve equity in access to schools. An analysis of PISA data shows that, in general, the difference between the socio-economic profiles of publicly managed schools and privately managed schools is twice as large in education systems that use universal vouchers as in systems that use targeted vouchers (OECD, 2012a).

Progressive vouchers and other similarly weighted funding formulas can be used to establish incentives to make disadvantaged and/or students with low performance more attractive to schools. The concept of a targeted voucher is that the money follows the student to the school they attend and the amount depends on the educational needs of the child. As a consequence, disadvantaged students bring more funding to their school, compared to "regular" students. This design responds to individual concerns of parents, who are allowed to choose their children's school, and social concerns of promoting equity and establishing a level playing field for all children.

In the Netherlands, for example, school budgets depend on enrolment and vary according to demand, but students from less privileged backgrounds receive more public money. This scheme was adopted for all primary schools in the Netherlands in 1985, and schools with substantial numbers of weighted students received more funds. Once the level of funding for each school is determined, based on the need of individual students, there is no requirement that schools use these extra resources directly for these students. They can, for example, choose to reduce the number of students per class. The weighting for each student is determined by his or her parents' educational level (Musset, 2012). Empirical research conducted by Ladd and Fiske (2011) shows that this system succeeded in distributing differentiated resources to schools according to their different needs: primary schools with a high proportion of weighted students have, on average, about 58% more teachers per student, and also more support staff.

Similarly, the Chilean education system adopted a weighted voucher system in 2008, providing an extra per-student subsidy for disadvantaged students. The voucher for children with low socio-economic status and indigenous children is 50% higher than for children that are not considered priority. Financing schemes like this provide the right type of incentives for schools to enrol more disadvantaged children and therefore reduce segregation. They can also mitigate the stratifying effects of unrestrained universal voucher programmes (Elacqua, 2009).

These arrangements call for greater alignment with student funding formulas in general.

Recommendation 1: Promote quality with equity across schools in Sweden

The following policy actions can help the Swedish government ensure that its school system is effective in meeting the learning needs of its students, with high expectations focusing on student performance, fair funding approaches to deliver high quality education across the country, and school choice arrangements that contribute to delivering quality with equity.

Policy action 1.1: Set high expectations for all students by building on the curriculum

Sweden strongly supports education, has inclusive schools and statutory requirements for all schools to deliver education adapted to the needs of individual students. Teachers and students report general well-being in schools, but it is not clear that students are fully engaged with their learning or that they are surrounded by a culture of high expectations underpinned by the curriculum. Furthermore, important concerns arise:

- The possibility that students at age 15 do not have the basic competencies in mathematics and reading required to contribute to society and the economy.
- The need to ensure that migrants who arrive in Sweden continue to be integrated effectively into society so as to best contribute in the future.
- The sizeable number of boys who fail to make the grade in all three core PISA subjects, a major challenge for the education system.

Swedish comprehensive schools show large within-school variability, and successive PISA cycles have shown a decline in performance overall, with increasing proportions of low achievers and low proportions of high achievers. Swedish schools have to better integrate migrants and raise underperformance among boys, and also to engage and motivate students with a culture of high performance. Indeed, results of the OECD Survey of Adult Skills show that Swedish adults have among the highest skills across participating countries; this high level of skills can also be present in the education system.

Swedish schools need to be able to respond to decreasing student engagement and have a more disciplined climate of high expectations that responds to diverse student learning needs. There are different and complementary strategies to respond to this key challenge.

First, Swedish schools, parents and society at large need to **set clear and high expectations of students**, demand hard work, and challenge students without overloading them, and use assessment strategies consistent with these expectations, including strong emphasis on formative feedback. This is crucial for student learning and for making students active participants in their learning, especially for both high and low performers.

The introduction of the new Swedish curriculum in 2011 can be an opportunity to state and build these expectations more clearly for schools, teachers and students than was the case with the 1994 curriculum. They should build on the knowledge and skills already defined as key goals for the education system, which many refer to as skills for the 21st century, consolidating core skills of literacy, numeracy and science while further developing other areas including problem solving, critical and independent thinking, global competencies and environmental sustainability.

Teachers' capacity to deliver on the curriculum, building on the concept of high expectations, will require professional development to strengthen teachers' knowledge of the curriculum and pedagogical skills to respond to individual students' learning needs, in particular to ensure that children are gradually prepared for more inquiry-based and personalised learning. Skills in formative assessment are key; it is more motivating to students and builds self-efficacy and perseverance, as do they learn to learn.

Second, Sweden should consider **enhancing preventive approaches to ensure that all students consolidate basic skills** at early stages and go on to complete their

education. One option may be assessment of students for potential reading and math difficulties early in primary school to ensure that those who may be falling behind receive intensive preventive instruction and that their progress is regularly monitored. In mathematics, it is important to identify low performance as early as possible. Current research confirms that mathematics learning can be fragmented: a student may master some related concepts and miss others. Thus, without targeted help and assessment of what the specific problem is, a child with perfectly good ability to do math may lose confidence. In addition, mathematics requires strong reading and higher-order thinking skills, and if taught in isolation, may not help students develop the range of strategies needed for problem solving.

This focus on learning at earlier ages can require continued efforts to improve the pedagogical capacity of teachers and school leaders (see Chapter 3). Effective learning environments require that staff focus on learning together with well-being and be attuned to learners' motivations and engagement. Teachers must be able to employ a range of assessment strategies to obtain information on student learning, with a clear emphasis on formative assessment to best respond to their students' learning needs (OECD, 2012a). School leaders across Sweden should also ensure that schools support differentiated teaching strategies and personalised learning.

Introductory programmes to strengthen completion of upper secondary education appear as a good alternative when preventive approaches have not accomplished their task and for those who have not had an opportunity to go through the education system. However, there is a risk that these programmes may become an option for selecting and tracking low-performing students. These should be closely monitored and evaluated to ensure that they do not become a dead end.

Policy action 1.2: Consolidate support to disadvantaged groups

While the Swedish school system is relatively equitable, there are some clear areas of concern. Students with migrant background and other disadvantaged groups have higher probabilities of lower performance. Immigrant students show lower skills in literacy and numeracy, although their performance has increased slightly. At the same time, more than 6 out of 10 boys make up the group of low performers in Sweden (below Level 2 in PISA), although gender gaps overall are smaller in Sweden than in other OECD countries.

First, Sweden can consider how to **best support the integration of migrant students with a coherent strategy across Sweden**. It is already evident that Sweden has the capacity to integrate migrants in its schools: second-generation migrants have higher skills than first-generation migrants, showing the added value of Swedish schools. Currently, support for migrant students is delivered at the municipal level which can result in varying quality of services. Sweden can benefit from a consistent national strategy or a clearer national approach to bring together the current range of strategies and support in Sweden for enhancing the performance of migrants in schools.

Part of the strategy should be to **enhance Swedish language skills for migrant students and their parents**. Language skills are key for immigrant students to participate in school and civil society. The language support already provided helps improve and accelerate language acquisition, but differences in outcomes are still prevalent among those who mostly speak another language at home compared to those who do not. Swedish language-learning policies need to be reinforced and embedded in a

comprehensive strategy, both for very young immigrant children and for students who arrive later with little knowledge of Swedish.

Reception classes need to be of high quality, and extra support should be available to immigrant children who need it. The capacity of teachers and school leaders to integrate migrant students in mainstream education needs to be strengthened through targeted continuous professional development as well as support in the classroom, in terms of extra assistants and subject-specific teaching resources. Parents clearly have a role to play by learning the Swedish language themselves and exposing their children to Swedish language publications and media at home (OECD, 2012b).

Third, **adverse effects of the concentration of immigrant students in disadvantaged schools need to be reduced**. This can be achieved by investing more heavily in disadvantaged schools or attempting to reduce the degree of concentration through housing or school-choice policies. These two issues are addressed further in Policy actions 1.3 and 1.4.

Regarding underperforming boys, Sweden needs to work towards **engaging their interests and dispositions** by creating learning environments, pedagogical practices and curricula that are personalised and tailored to individual students' needs. Research shows that once boys have opportunities to practice their skills in real-world settings, they often thrive and pick up some skills, such as reading skills. To tackle weak reading performance among boys, research suggests that it can be effective to give students greater choice in what they read. In addition, teachers' capacity to be aware of their own gender biases could be further developed as part of a national strategy (OECD, 2015a).

Policy action 1.3: Review school funding to ensure quality learning opportunities for all students

At present in Sweden, every municipality decides the amount of funding that will be provided to the different schools in its jurisdiction. Evidence shows that there is no common standard or formula and that municipalities may struggle to allocate funding effectively. The key issue is whether the funding is achieving its objective of delivering a quality education for all students, taking into account their individual or group needs. The issue of effectiveness does not directly refer to costs, but rather to how the funding is contributing to accomplish stated objectives.

Sweden needs to revisit its model to ensure that it delivers on apparently competing objectives: to attain higher results through competition while maintaining its traditional equity-oriented system. This may require a clearer mandate from the national government on educational priority funding for disadvantaged students or schools, with more clearly targeted central budgets, or establishing regulatory power over municipal education.

Evidence from different studies shows that the current funding allocation approach in Sweden is not accomplishing its objectives. Funding for equalisation purposes to ensure that education meets individual needs is not fully responding to its remit, and at the same time is not delivering higher quality. There is high variability in funding approaches and funding is not necessarily directed in a targeted way to those who need it most, either disadvantaged or migrant students.

First, at the system level, Sweden can **review current funding mechanisms to ensure that they are effective and respond to objectives**. One area to review is efficiency of expenditure. With one of the higher per-student costs among OECD

countries, Sweden may consider allocating resources to areas that will deliver higher results in the current context, such as targeting teacher salaries (discussed in Chapter 3).

Sweden also needs to consider establishing national criteria or guidelines to ensure equity and especially consistency in school funding across Sweden. These can support municipalities in their objectives while ensuring that the national education mandate is fulfilled. This would not mean a change, but instead a consolidation of what is currently in place in municipalities which have more professionalised operation approaches. It will also be necessary to review the national grant and additional grants delivered for equity or other national priorities, as well as student support strategies as they relate to funding.

The different options Sweden can use include earmarked funding, defining criteria for municipalities and schools, or student funding formulae. **Student funding formulae** appear to be the best suited approach for the current environment of decentralised governance and administration. Defining clear formulas for students, building on socio-economic background and residence, can contribute to sustaining equity while ensuring consistency in funding across Sweden.

Second, it will also be important to **ensure that funding strategies are evaluated and followed up** for effectiveness. This could be undertaken more formally by the National Agency for Education, which should focus on developing clear tools for municipalities and private organisers to be able to deliver on the nationally defined funding approach. At the same time, there should be more investment in capacity building for monitoring and evaluation at the municipal and school level, and better data collection on the situation of disadvantaged groups and migrants and their progress.

Finally, **local authorities require more support** to enhance their capacity to design and deliver programmes that target equity.

Policy action 1.4: Revise school choice arrangements to ensure quality with equity

Sweden can benefit from managing school choice to prevent segregation and increased inequities. Providing full parental school choice can result in segregating students by ability and/or socio-economic background and generate greater inequities while not necessarily raising performance. Some of the intended benefits of competition – for example, greater innovation in education and a better match between students' needs and interests and what schools offer – are not necessarily related to student achievement. In addition, potential disadvantages in terms of equity and social inclusion can also have longer-term repercussions in society. Where parents can choose the school that their children attend, disadvantaged parents can end up having a more limited set of choices than more affluent parents. As a result, the benefits of school choice may not accrue to the same extent to disadvantaged students as to their more advantaged peers.

Swedish school choice arrangements do not currently have a consolidated approach to ensure equity while supporting quality. There are no clear guidelines for schools, and funding strategies do not necessarily prioritise disadvantaged students across all municipalities, possibly implying that independent schools become more selective towards more advantaged students, given the same student costs.

In Sweden, choice programmes can be designed and managed to balance choice while limiting segregation and a negative impact on equity.

First, Sweden can **improve the access of disadvantaged families to information about schools** and support them in making informed choices. This can require efforts to

make the information more accessible to families who may not speak Swedish or may not be aware of the range of options possible.

Second, Sweden can **introduce controlled choice schemes** that supplement parental choice to ensure a more diverse distribution of students at schools. This requires ensuring that equity criteria are adopted for schools to prioritise disadvantaged students or that funding arrangements make disadvantaged students more attractive to high-performing schools.

Finally, Sweden can **define national guidelines to ensure that municipalities integrate independent schools** in their planning, improvement and support strategies to encourage a culture of collaboration and peer learning.

Notes

1. Equity in resource allocation refers to the difference in the index of quality of schools' educational resources between socio-economically advantaged and disadvantaged school.

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Chapter 3:

Building a high-quality teaching profession

This chapter reviews the challenges and opportunities for building a teaching profession able to provide adequate support to all Swedish students. The Ministry of Education and Research has recently initiated a number of reforms including changes in initial teacher education and career structure. Remaining challenges include relatively low status and attractiveness of education as a career choice, lack of focus and quality of teacher preparation programmes, a pressing need for continuing professional development for educators, and the widely variable capacity of municipalities to support continuing learning and development of educators.

Sweden should take immediate action to build capacity for teaching and learning through a long-term human resource strategy for the education sector. We propose three specific policy actions for a more focused and coherent approach to improving the quality and status of the teaching profession in Sweden: 1) creation of a publicly-funded, semi-autonomous National Institute for Teacher and School Leader Quality to integrate research and practice, develop standards, models and frameworks for initial education and continuing professional development, and address the current, highly-fractured state of initial teacher education; 2) a national review, led by the National Institute for Teacher and School Leader Quality, of quality, coherence and effectiveness of teacher education and professional development, leading to proposals for teacher education programmes; and 3) a major policy focus at ministerial level on improving the status and quality of the teaching profession, including: raising salaries as part of the effort to create a well-designed career structure; developing professional standards as foundation for appraisals and career structure; more selective entry into teacher education programmes; and adequately resourced continuous professional development.

Recommendation 2: Develop a long-term human resource strategy to support high-quality teaching and learning

Sweden faces a serious deterioration in the quality and status of the teaching profession that requires immediate system-wide attention. This can only be accomplished by building capacity for teaching and learning through a long-term human resource strategy for the school sector.

Evidence on student performance, instructional practices of teachers and the school climate suggest that the Swedish school system is struggling to find its footing amid structural and demographic changes. As in other OECD countries, Swedish principals and teachers report that their main instructional challenge is dealing with heterogeneity of student populations, in terms of learning issues that students present and willingness of students to engage in challenging work. Swedish principals report a higher incidence than in other OECD countries of teacher absenteeism, teachers struggling with student learning differences, and student learning being hindered by teachers' low expectations of their students.

Between 2003 and 2012, there has also been a slight decline in school leaders' assessment of the disciplinary climate in Swedish schools. Sweden has the highest proportion of students arriving late for school of all OECD countries. There has also been a decline in Swedish students' positive attitudes toward school, compared to an increase across other OECD countries. Within these general patterns in the instructional climate of Swedish schools, there is considerable variability. More than 90% of the variance in measures of the quality of student-teacher relations in Swedish classrooms is among teachers within schools; only a small proportion is between different schools.

A concern raised consistently in our conversations with students and parents in Swedish schools is that teachers are having problems dealing with disruptive and disengaged students, and that this is affecting learning of students who are highly motivated to learn. Still, in TALIS 2013 teachers reported a high sense of self-efficacy: a vast majority (96%) of teachers in Sweden report being satisfied with their performance in their current school (OECD, 2014a). It is difficult to reconcile the high sense of self-efficacy of teachers with the low performance of Swedish students in the various international assessments. These patterns suggest the need for increased attention to basic issues of the relationship between teaching practice, school culture, and student engagement (OECD, 2013b).

At the most basic level, a nation's education system is only as good as the quality of the people who teach and lead in it. There are, to be sure, important structural factors that contribute to a strong system of teaching and learning in society – a responsive and flexible institutional structure, clear policy guidance, adequate resources, and clear systems for monitoring results. But in the end, these structures and policies are only as effective as the people who assume daily responsibility for teaching and learning in the system.

Moreover, as Sweden's performance on successive PISA assessments attests, building and sustaining a strong human resource base for the school sector is not a one-time act. A human resource system that might be adequate, even exemplary, at one time, with one set of demographic and economic factors, might fall short of the demands of a new set of factors. Swedish society is constantly changing, and new economic and social factors must be taken into account in building and maintaining a high-quality teaching and

leadership cadre. Emerging evidence suggests that the human resource model that worked to position Sweden among the top-performing countries in the past is not adequate for present and future demands.

Education – a relatively low-status and unattractive profession

Many high-performing countries share a commitment to professionalised teaching, according teachers the same status as other highly-regarded professions (OECD, 2014c; Schleicher, 2011; Schleicher, 2012). Evidence shows that this is not the case for Sweden. Sweden's decline in PISA over the past decade has provoked a vigorous debate around a broader set of structural issues in the education sector. The human resources part of this debate has focused on three possible contributing factors:

- A long-term decline in the relative status of university teacher education programmes, which resulted in decreased demand and selectivity for entrance into these programmes.
- A relative lack of coherence in the guidance that educators receive about curriculum, pedagogy, and learning goals, partly stemming from the decentralisation reforms of the 1990s.
- Increased bureaucratic pressure on teachers and school leaders to do work that they regard as less central to their core responsibilities for teaching and learning.

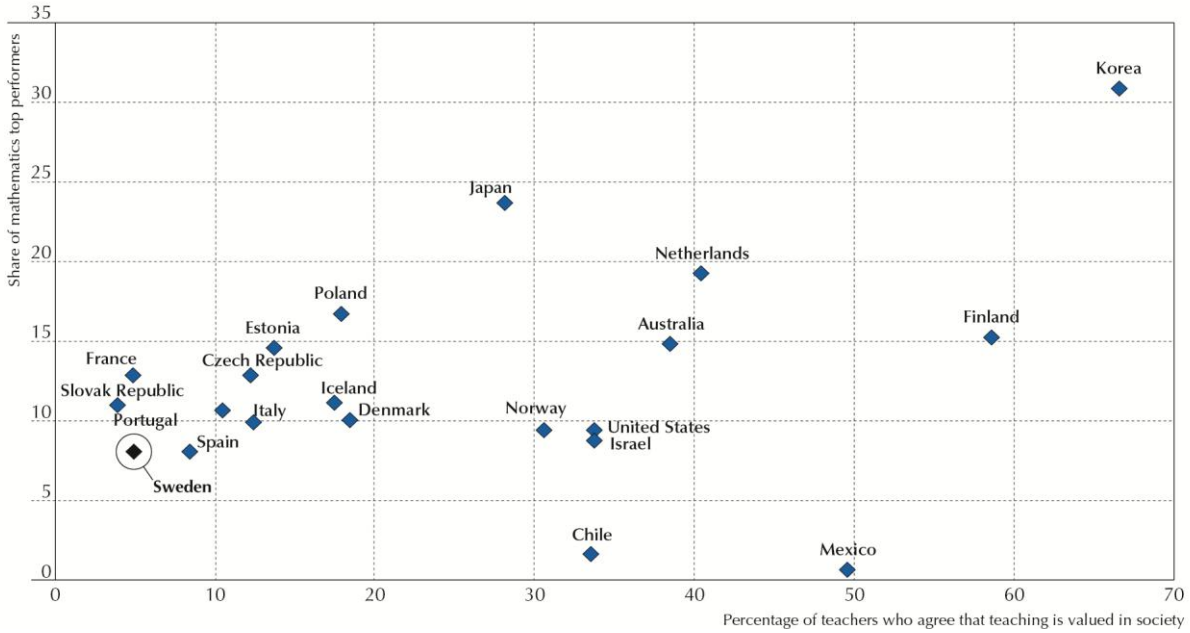
The majority of Swedish educators interviewed for this study say that these three factors have led to a decline in the status of the teaching profession in Swedish society. This, in turn, leads to a decline in the competitiveness of teaching as an occupational choice for Swedish university students, and contributes to an overall decline in the quality and performance of Swedish schools.

The relative decline in occupational status of teaching in Swedish society is evident in the decline of the status of teacher education at the university level relative to other career choices, the growing gap between predictions of future supply of teachers and current enrolments in teacher education programmes, and the perception among current teachers that teaching is not a valued profession in society (MoER, 2015; OECD, 2014a).

Evidence also suggests that being principal of a Swedish school can be far from a desirable position. To start with, various sources point to the challenging workload of principals which limits their ability to prioritise pedagogical leadership and causes stress and an unhealthy work-life-balance (Swedish School Inspectorate, 2012; ETUCE, 2012; MoER, 2015). Investigations and audits of Swedish schools have further pointed to an unclear relationship between principals and the political leadership in municipalities, which is also marked by distrust. Principals, like teachers, have a heavy workload which seems to have increased in recent years. Surveys show a high turnover of principals, suggesting that their mission is difficult. Both lack of resources and lack of trust are stated as reasons why so many principals are leaving schools to find other management jobs (SOU, 2014:5; MoER, 2015).

In our interviews with key stakeholders, we heard these themes repeatedly and consistently from people in various roles and levels of the system. For example, several people observed that a generation ago university teacher education programmes were among the most competitive and selective programmes at university level, but are consistently now among the least. This decline in status, real or perceived, has had an impact on the ability of universities to compete for talented undergraduates.

Figure 3.1. Relationship between lower secondary teachers' views on the value of their profession in society (TALIS 2013) and the share of top mathematics performers in PISA 2012



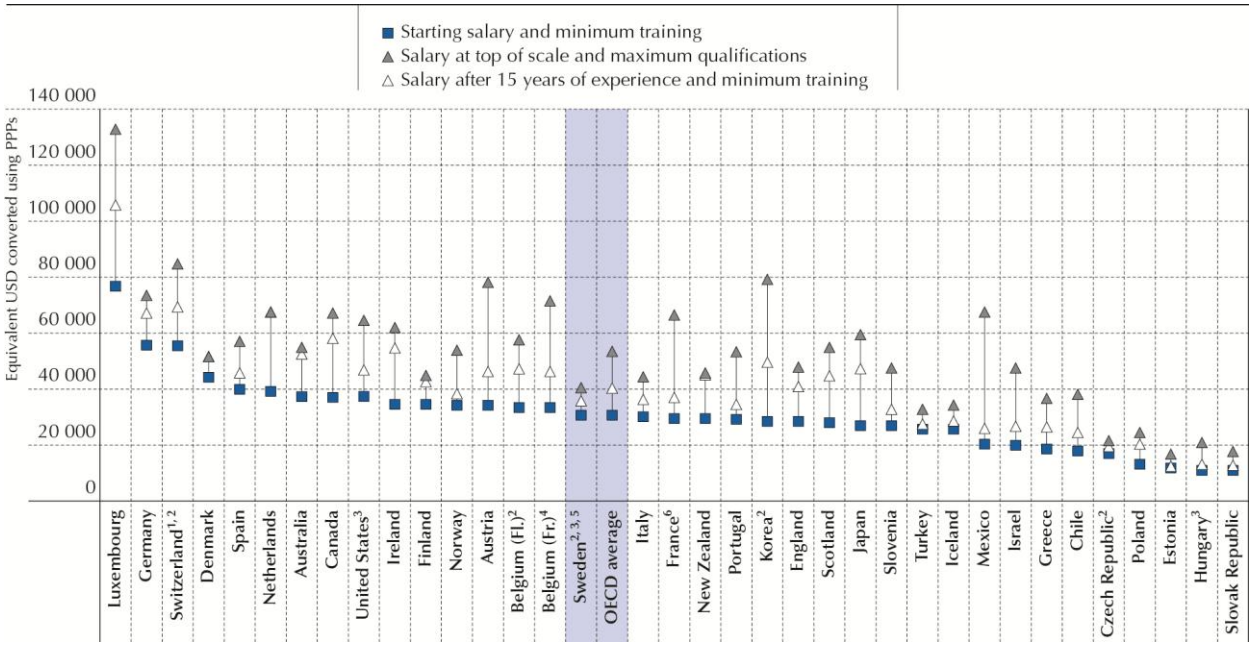
Source: OECD (2014a), *TALIS 2013 Results: An International Perspective on Teaching and Learning*, TALIS, OECD Publishing, Paris, http://dx.doi.org/10.1787/9789264196261-en; OECD (2014b), *PISA 2012 Results: What Students Know and Can Do (Volume I, Revised edition, February 2014): Student Performance in Reading, Mathematics and Science*, PISA, OECD Publishing, Paris, http://dx.doi.org/10.1787/9789264208780-en.

Educators and their representatives at the national level also stressed the impact of decentralisation on the work-life of teachers and school leaders, in the form of repeated changes in policy priorities at national and municipal levels and increased scrutiny of student performance, often with no clear guidance about goals and performance expectations. School-level practitioners, primarily in municipal schools, consistently observed that they felt pressure to document their decisions on a daily basis to protect themselves from possible future scrutiny. People at all levels observed that there has been a marked cultural shift in the school system, from belief in the professional competence and expertise of educators and a high degree of social trust in their judgments, to one of distrust, increasing bureaucratisation of decisions, and uncertainty about expectations under which educators are supposed to operate.

Research evidence on teacher human capital indicates that in high-performing school systems, such as Canada, Finland, Japan, Korea and Singapore, teachers enjoy high status in society and have sufficient levels of pay. A well-designed remuneration system clearly signals the status of the teaching profession. If salaries are sufficiently attractive (i.e. competitive with other sought-after and relatively well-remunerated professions), this can help draw the best graduates into the profession (OECD, 2014c; Schleicher, 2011; Schleicher, 2012). Although starting salaries of teachers in Sweden are around the OECD average, the salary structure is flat (Figure 3.2). Evidence also suggests that over the last decades, teachers' wages have been unfavourable relative to certain other professional groups (Persson and Skult, 2014).

Figure 3.2. Lower secondary teachers' salaries at different points in their careers (2012)

Annual statutory teachers' salaries, in public institutions, in equivalent USD converted using PPPs



Notes: 1) Salaries after 11 years of experience, instead of 15 years; 2) Salaries at top of scale and minimum training, instead of maximum qualifications; 3) Actual base salaries; 4) Salaries of teachers with typical qualification instead of minimum; 5) Year of reference 2011; 6) Includes average bonuses for overtime hours.

Source: OECD (2014d), *Education at a Glance 2014: OECD Indicators*, OECD Publishing, Paris, http://dx.doi.org/10.1787/eag-2014-en.

Our analysis leads us to conclude that it is necessary to review remuneration of Swedish teachers and school leaders to draw the best people into the profession and keep them there. OECD evidence suggests that one of the most powerful success factors in education is attracting quality graduates. While this is not only a question of salary, salaries do matter (OECD, 2005; OECD, 2014e; Schleicher, 2011). Interestingly, countries that have improved their performance in PISA 2012, such as Brazil, Colombia, Estonia, Israel, Japan and Poland, have all established strong policies to improve the quality of teaching staff by raising the requirements to earn a teaching licence and also increasing salaries to make the profession more attractive to high-achieving students (OECD, 2014a). For example, Poland, one of the better performing OECD countries on PISA 2012, has increased salaries of teachers by 50% in recent years (2007-13) (OECD, 2014e).

Salaries represent the greater part of what OECD countries spend on education. Raising teacher salaries may therefore have a major impact on the education budget. However, this higher expenditure needs to be set against benefits such as lower staff turnover and improved morale. It may help raise the status of the education profession and will certainly make it more attractive, with the ultimate aim of improving student performance. As this report was being written, the Swedish government was considering raising teachers' salaries as part of a larger effort to increase the attractiveness of the profession. We consider this a positive development and another signal of the government's intention to transform teaching and leadership in school education into an

attractive career possibility. To achieve this goal, Sweden should consider not only raising teacher salaries, but also working towards a well-designed career structure that supports professional growth of teachers and school leaders, and recognises and challenges them throughout their careers.

Coupled with these overall observations about the status and work-life of educators in Sweden is an emerging challenge that can also be seen as a major transformational opportunity. Labour market projections suggest a shortage of as many as 44 000 teachers by 2020 and 49 000 by 2030, based on current projections of student enrolment and expectations for entry-level applicants (MoER, 2015). This would constitute a turnover of nearly 50% in the teacher workforce. The data project a similar picture for turnover of school leaders. These numbers may seem daunting in the face of current employment levels in the school system, but they also signal an opportunity for a major transformation in composition of the education work force if demographic changes are accompanied by a thoughtful strategy for transformation of the culture and knowledge requirements.

Since 2011, there have been some important initial policy changes intended to address some of these issues. We discussed the need for reconsidering remuneration of teachers and school leaders to raise the status and attractiveness of the profession, but having competitive compensation is only part of the equation. Career prospects, career diversity, and recognising teachers' responsibility as professionals are important elements for retaining qualified and motivated staff and ensuring they are challenged throughout their professional lives. This is particularly relevant for those in the middle stages of their careers (OECD, 2005; OECD, 2014e; Schleicher, 2011).

A positive development is the recent creation of two new positions, First Teacher and Senior Subject Teacher (see Chapter 1), which have additional responsibilities and higher salaries. These positions offer greater career diversity and scope for obtaining a higher salary, a positive development that demonstrates the importance of developing a well-designed career structure to help raise the status of the teaching profession and attract and retain the best people.

Teacher education programmes have been required to reapply for the authority to offer degrees and to specify in greater detail the competencies of their graduates and curricular requirements of their programmes. There is now a further requirement that only teachers with specific university-level credentials are authorised to provide formal assessments of student performance and issue grades. Formal academic and practical training for school leaders, recruited from the ranks of high-quality teachers, is beginning to develop under the sponsorship of the state.

These modest shifts in policy and programmes signal a recognition that changes in the human resource model surrounding the preparation, development and remuneration of teachers and school leaders are necessary to make major improvements in teaching and learning. Sweden may look to examples in Australia, the Netherlands and Singapore for more fully developed models of competitive remuneration systems and well-designed career structures with increased responsibility and greater career differentiation, including career paths from teaching into school leadership.

In Singapore, for example, prospective teachers receive a monthly stipend that is competitive with the monthly salary for recent graduates in other fields, and they must commit to teaching for at least three years. The Ministry of Education also actively monitors labour market conditions and adjusts the salary schedule, especially for initial entry teachers, to prevailing competitive occupations. Disparities in compensation and in

the rate of growth for competing occupations are, in part, corrected by providing generous opportunities for professional development and attractive working conditions.

Teachers also receive annual performance appraisals after their initial three years, and are expected to develop individual improvement plans. Teachers do not progress simply by virtue of seniority or by taking on administrative responsibilities. Rather, they can choose different career paths that move them towards becoming master teachers, curriculum leaders or school principals. Every year they discuss their progression along these pathways with mentors, or consider whether they need to change track (OECD, 2011a; Tucker, 2011).

Weak institutional support for initial and continuous professional development

A large number of teacher education institutions

Initial teacher education represents the entry point into the profession, and the way it is organised plays a key role in determining both quality and quantity of teachers (Musset, 2010). Indeed, the extent, content and quality of teachers' education can influence their future in-service learning needs. The human resource challenge of the Swedish school system, and the proposals to address it, are nested in a complex and often counter-productive institutional structure. University-level teacher education programmes were allowed for decades to develop more or less at their own pace in response to perceived local interests and constituencies. Today 28 higher education institutions in various regions provide initial teacher education programmes. While the process of reapplication has brought increased attention to the importance of quality and focus in these programmes, it is also clear that the legacy of the decentralisation reforms of 1990s has been a scattered and unfocused approach to developing talent for the education sector.

The Swedish National Audit Office (SNAO) has noted that in the existing highly decentralised structure there are significant gaps between initial teacher education programmes and actual demand by teachers at the school level. Teacher education programmes tend to focus on preparation in areas where they have existing faculty members, rather than on emerging areas of demand at school level. There are mismatches between the interests of applicants to teacher education programmes and the areas of specialisation in demand at school level, and teacher education programmes tend not to collaborate on calibrating supply and demand for teachers (SNAO, 2014).

The existing teacher education programmes do constitute a major asset for future development of teacher and leadership talent in the Swedish school system. In our conversations with university faculty members interested in teacher recruitment and development, we encountered a strong nucleus of people with promising ideas for future improvements to the school system. With few exceptions, however, most of those we spoke with felt that major improvements could not take place without substantial refocusing and restructuring of existing teacher education programmes.

International evidence supports this view. It suggests that initial teacher education is more likely to make a contribution to human capital development when there are a relatively small number of teacher education institutions that can collaborate and form close partnerships with governments and school systems. Frequently mentioned examples are Finland, which has just eight teacher education institutions, and Singapore, which has only one, the National Institute of Education (OECD, 2014c). But other countries, such as Wales, have reduced the number of initial teacher education institutions for much the

same reasons our interviewees mentioned (Tabberrer, 2013). We agree that this would seem to be the right way forward for Sweden, but it may not be enough.

To improve their education workforce, education systems like those of Australia, the Netherlands and Singapore have taken their point of departure from clearly-stated, widely distributed and highly publicised national standards for teaching practice. These standards are typically integrated with national curricula and assessment practices, and are used not just to provide guidance to teacher education programmes, but also to design induction, mentoring, and continuing professional development over the whole course of teachers' careers. In these systems, it is increasingly difficult to separate initial teacher education from the broader system that provides opportunities and supports teachers over their entire careers. In the process of deciding on the scope of teacher education in Sweden, and the optimal number, size, and focus of teacher education programmes, it would be helpful to have some initial agreement at the national level on what would constitute the standards and expectations for highly qualified teachers, and school leaders.

Variable capacity of municipalities to effectively support professional development

As education systems must increasingly respond to new societal, economic and individual needs, it is arguably the local level that is most challenged by these developments. Education policies must be implemented at this level, and it is here that they either succeed or fail. A key element of successful implementation of policy reform is ensuring that local authorities and other stakeholders, such as school leaders, teachers and parents, have sufficient capacity to meet this challenge (OECD, 2012).

When looking at local authorities in Sweden (municipalities), the evidence clearly shows wide variations in their capacity to provide the kind of recruitment, induction, mentoring, and continuing professional development necessary to support sustained improvements in teaching and leadership practice. Larger municipalities have budgets big enough to provide the economies of scale necessary to mount relatively strong human resource investments for educators, and, in fact, some do. Whether municipalities that have the resources actually choose to spend the money necessary to provide continuous improvements in student learning is entirely up to local decision-making, and evidence suggests that municipalities vary considerably in their disposition to making such decisions (NAE, 2011; Blanchenay, Burns and Koester, 2014; MoER, 2015).

Evidence suggests that many smaller municipalities may not be able to provide the level of continuing support necessary to sustain improvements in the quality of the teaching and leadership force (NAE, 2011; Blanchenay, Burns and Koester, 2014). The dimensions of this challenge are stark. Of the 290 municipalities in Sweden, in 2013 there were 78 municipalities with fewer than 10 000 inhabitants and just 46 municipalities with a population of 50 000 or more, located predominantly in southern, relatively urbanised parts of the country. The extremes range from 894 165 people in Stockholm to a mere 2 442 in Bjurholm (Sweden Statistics, 2013). We visited several municipalities throughout Sweden (Annex B), including some larger urban municipalities that had relatively sophisticated and promising professional development strategies, keyed to the needs of their student and teacher populations. But it is evident that even these larger municipalities sometimes face difficult trade-offs with other municipal expenditures and are heavily dependent on the capacity of municipal education officials to support and influence their schools.

It therefore seems reasonable to question whether it is possible to have a significant national professional development strategy when funding is dependent largely on municipal budgets. And there is reason to believe that many municipalities do not have the capacity to support such a significant human investment strategy for sustainable school improvements, even if they had the political will to do so.

A significant national professional development strategy may be further complicated by the isolation that many independent schools face within their municipalities. The independent school sector operates largely as a collection of small-scale providers and large-scale companies with multiple sites. They are entirely autonomous in their decisions about the level of human investment they make in their teaching force. Across the independent schools we visited, we found patterns of variability in investment in professional development similar to those we found in municipal schools. Independent schools are largely left to their own devices around professional learning opportunities for teachers. They are largely isolated from the opportunities offered by municipalities, even when they are located in larger municipalities.

A basic reality of investments in continuous professional development is that they require some degree of economy of scale. The described structural conditions and the, in many cases, limited collaboration among Swedish schools and municipalities have resulted in a fragmented school system that does not provide optimal conditions for professional development of teachers and school leaders. Further strengthening roles and responsibilities at all levels of the system and a strong focus on promoting collaboration and networking across schools and municipalities are key components for overcoming these structural challenges and moving the system forward (see Chapter 4), as is the need to incorporate independent schools into municipal planning (see Chapter 2). National programmes like Mathematics Boost and Teachers Boost 1 have been implemented as a response to these challenges and many teachers and school leaders, including those we interviewed, feel that these programmes have had a positive impact on professional development and educational practice (MoER, 2015). Considering the variable quality of the education profession, implementation of such programmes should be continued, possibly with a stronger focus on monitoring and evaluation, to further enhance their effectiveness.

However, additional efforts are needed to adequately support professional development for educators who, for various reasons, are not benefiting from such national professional development programmes (Blanchenay, Burns and Koester, 2014; MoER, 2015) and/or work in schools and municipalities that face considerable capacity challenges. For this, Sweden may look to education systems like those of Finland, the Netherlands, Ontario (Canada) and Singapore, which have gone to great effort to build the capacity of teachers and school leaders, including through targeted policy interventions, with good results.

For the implementation of Ontario's education strategy, the government created a new 100-person secretariat responsible for building capacity and expertise to do the work. Ontario also created teams in each district and each school to lead the work on literacy and numeracy. By doing so, they paired external expertise with people at the local level. In addition, Ontario made great investments in strengthening leadership capacity at all levels of the system. Through its leadership strategy, Ontario managed to attract good candidates to posts and to prepare and support them to improve the quality of instruction (OECD, 2011a).

Educators not systematically supported throughout their professional life cycle

A consequence of the highly fragmented structure mentioned above is, simply put, that it fails to adequately support the education workforce through the various stages of the professional life cycle. This is a sobering reality for a country that depends heavily on the education sector to provide the means to support a high standard of living.

Figure 3.3. Elements of teacher professional development examined in TALIS 2013

Source: OECD (2014a), *TALIS 2013 Results: An International Perspective on Teaching and Learning*, TALIS, OECD Publishing, Paris, http://dx.doi.org/10.1787/9789264196261-en.

The OECD TALIS report (OECD, 2014a) groups the components of a life-cycle, systemic approach to human resource development into three stages following initial phases of selection and pre-service education: *induction*, or the initial introduction and socialisation of educators to the work environment and the general expectations of their role in the overall system; *mentoring*, or the collaborative transfer of knowledge and practice between more experienced and competent practitioners to early career practitioners; and *continuous professional development*, or the routine enhancement, up-dating, and deepening of knowledge and skills as practitioners advance through their careers, and as knowledge and skill requirements of their work increase as a result of research-based advances in practice.

Evidence from TALIS generally confirms a picture of highly fragmented and variable approaches to human resource management in Sweden, without any strategy, and suggests the need for a more systemic view of human resource development.

Induction

Research evidence shows the positive impact of well-designed induction and mentoring programmes for new teachers. The highest-quality induction and mentoring programmes include such features as frequent interaction around instructional practice with a knowledgeable and well-trained mentor teacher as well as the new teacher's principal or direct supervisor; clear guidance and expectations for progress over the induction period, grounded in concrete evidence of practice; and availability of mentors and supervisors for daily advice about issues of classroom practice initiated by the teacher. The positive impacts of well-designed induction and mentoring programmes show up in increased likelihood of teacher retention and satisfaction, as well as increased likelihood of teachers making use of specific teaching practices associated with successful student learning (Strong, 2008; Ingersoll and Strong, 2004; Ingersoll and Strong, 2011; Wong, 2004; New Zealand Teachers Council, 2011).

Swedish principals reported formal induction activities for new teachers or newly-employed teachers in about 63% of Swedish schools, despite the fact that it is obligatory for municipalities or independent schools to arrange introduction periods for new teachers (MoER, 2015). This percentage is, however, about average for OECD countries. Importantly, in Sweden's existing teaching force, only about 10% of permanent teachers report having participated in formal induction programmes, and 23% report having taken part in a general and/or administration introduction programme to the school. These proportions are much smaller than on average across TALIS countries (nearly 50% for both) (OECD, 2014a). Apart from access to and actual participation in these programmes, their effectiveness stands or falls with their quality, and evidence suggests this may be an issue of concern for Sweden. Kanpol (2007), for example, noted that culture and school structure often play a role in "deskilling teachers and robbing them of the enthusiasm to proceed with their job creatively". For new teachers, this experience may cause high levels of stress and feelings of isolation from both colleagues and the school community (Johnson et al., 2010; Uusimaki, 2010).

In some of the best performing education systems, induction models have more elaborate designs than those reported by Swedish educators (Box 3.1). These advanced models focus not just on general guidance for new teachers and socialisation to the workplace, but also on the specifics of state and national guidance for curriculum and pedagogy and on providing external sources of information readily available to teachers to inform instructional practice in their classrooms.

Box 3.1. Developing teachers throughout the professional life cycle in Singapore, Finland and France

Induction of new teachers in Singapore

Upon completion of initial teacher education, beginning teachers in Singapore undergo induction at both national and school levels. At the national level, they attend a three-day induction programme, called the Beginning Teachers' Orientation Programme, conducted by the Singapore Ministry of Education. This programme emphasises the importance of the role of teachers in nurturing the whole child and enables beginning teachers to consolidate their learning at the teacher institute. By presenting the roles and expectations of teachers, this programme also inducts new teachers into Singapore's teaching fraternity in the areas of professional beliefs, values and behaviours.

During the first two years of teaching, further guidance is provided to beginning teachers via the Structured Mentoring Programme. This programme enables them to learn practical knowledge and skills from assigned mentors who are experienced or senior teachers at the school. The school has the autonomy to customise the programme according to the learning needs of the new teachers. Besides practical skills, the programme helps to deepen the understanding of new teachers about the values and ethos of the teaching profession.

Teacher development in Finland

In Finland, professional development of teachers is seen as a comprehensive process, which begins with initial teacher education. Teacher education has been available in universities since 1971, and a master's degree is required, including a master's thesis. This kind of research-based initial teacher education leads to teachers becoming reflective professionals who actively develop their own work and professional skills and methods, as researchers do.

Box 3.1. Developing teachers throughout the professional life cycle in Singapore, Finland and France (continued)

Finland does not have a nationally organised induction system. Education providers and individual schools have autonomy over arranging support for new teachers, and therefore there are notable differences between schools in ways of implementing induction. However, there is awareness of the increasing need for support for new teachers, and many different applications of mentoring practices are already in place. A specific model of peer-group mentoring has been developed and is being disseminated by the Finnish Network for Teacher Induction (*Osaava Verme*), which is part of a seven-year national *Osaava* programme (2010-16) funded by the Ministry of Education and Culture. The objective of the programme is to motivate education providers and individual institutions to take greater responsibility and a proactive approach to their own staff development activities with the help of networking activities and mutual co-operation.

Induction as part of a consecutive model of teacher education in France.

From the early 1990s to 2010, France had a consecutive model of teacher education. Training in academic subjects was largely predominant, which led to a high level of specialisation in secondary education teaching. After a bachelor degree or more, students had a competitive examination for recruitment. Successful candidates received one year of training and were assigned a tutor. Since the early 2000s, new teachers have been mostly enrolled in formal induction programmes during their first year of regular employment, with scheduled time for activities.

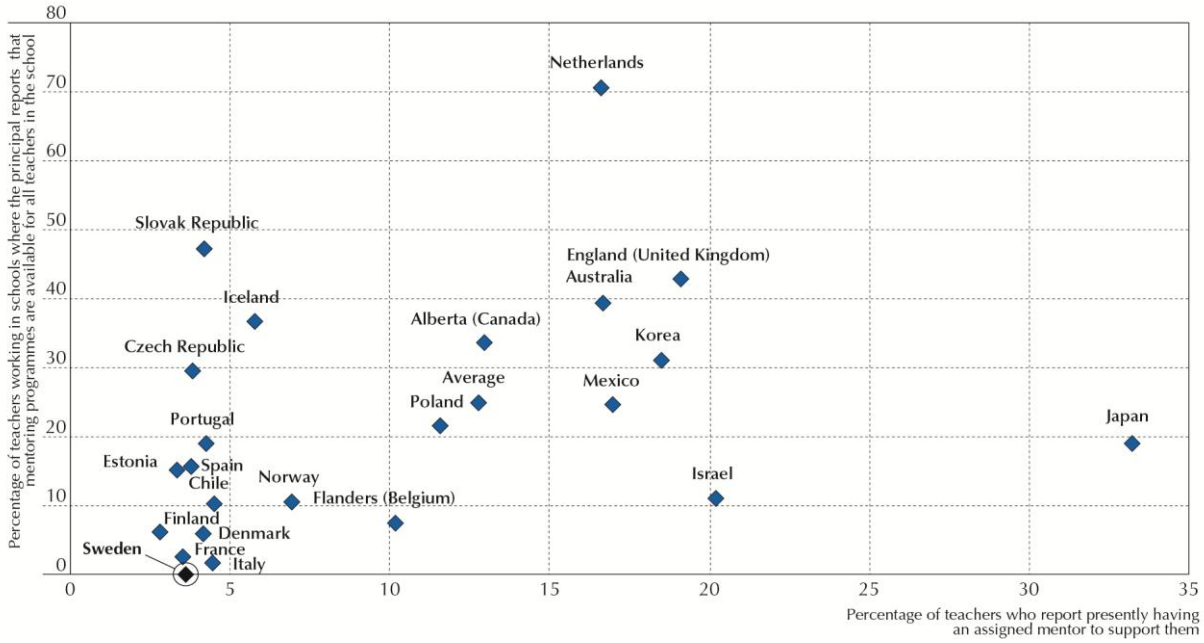
These specific programmes take place outside the schools, and they are based especially on classroom practices to help new teachers manage a full-time job. Launched in 2010, the reform, called *mastérisation*, made access to the teaching profession conditional upon completing a master's degree. A new structure of initial teacher education has been elaborated under the Education Act of July 2013 and has been effective since the start of the 2013/14 school year. In graduate schools of professorship and education (*Écoles supérieures du Professorat et de l'Enseignement*, ESPE), which are integral parts of the universities, the study programmes combine academic subject studies, theoretical pedagogy and practical teaching experience to ensure a progressive start to the teaching profession. Induction programmes still exist, but they are now reduced and included in other in-service teacher training activities. If available, they are often focused on classroom management in order to respond to new teachers' needs, especially those assigned to difficult areas.

Source: OECD (2014a), *TALIS 2013 Results: An International Perspective on Teaching and Learning*, OECD Publishing, Paris, http://dx.doi.org/10.1787/9789264211339-en.

Mentoring

The literature defines mentoring as personal guidance, usually provided by more experienced teachers to beginning teachers (OECD, 2014a). As noted above, well-designed induction and mentoring programmes are associated with positive impacts on retention and satisfaction of new teachers and development of effective practices. Recently, mentoring programmes have become a dominant form of teacher induction (Strong, 2009). Mentoring as part of the induction process for new teachers should, however, be distinguished from the more general practice of mentoring, which can occur over the entire professional lifespan of a teacher. For example, the introduction of new curricula or new pedagogical practices typically requires teachers to engage in extended learning and trial and error, which can benefit from close relationships with other teachers who have had prior training and experience in the new practice. Increasing demands on experienced teachers without increasing support for new practice can create morale problems. Hence, mentoring as a practice over the career of a teacher can have a positive effect on both morale and practice (Thompson et al., 2004).

Figure 3.4. Availability of and participation in mentoring programmes, TALIS 2013



Source: OECD (2014a), *TALIS 2013 Results: An International Perspective on Teaching and Learning*, TALIS, OECD Publishing, Paris, http://dx.doi.org/10.1787/9789264196261-en.

The overall objective of teacher-mentoring programmes is to give newcomers a local guide, but the character and content of these programmes vary widely (OECD, 2014a) both among and within countries (as is the case in Sweden). Mentoring programmes in Swedish schools are locally decided, planned, carried out and evaluated and "therefore differ from one municipality from another" (Jokinen et al., 2008, p. 87). Little is known about the quality of these programmes. However, Sweden has the lowest participation rates in mentoring programmes of all the countries participating in TALIS. Only 17.5% of teachers reported having participated in mentoring and/or peer observation and coaching as part of a formal school arrangement, considerably lower than the TALIS average of 29.5%. Less than 10% of schools offer mentoring, and less than 10% of teachers have participated in any kind of mentoring. The rates of participation in mentoring in Swedish schools are so low that it was impossible for TALIS to relate mentorship to levels of engagement in other types of professional development. But in benchmark systems like Japan and Korea, mentoring typically involves large proportions of the teaching force (Figure 3.4) and participation in mentoring relationships is highly related to participation in other forms of professional development (OECD, 2014a).

Continuing professional development

The world is rapidly changing, and the challenges to individuals and societies imposed by globalisation and modernisation are widely acknowledged. Schools and the people working in them are now urged to learn faster in order to deal effectively with these growing pressures (Fullan, 1995; Moloi, Grobler and Gravett, 2006; Silins, Mulford and Zarins, 2002; Schleicher, 2011). According to Garrat (cited in Stoll and Fink, 1996): "To be relevant, schools must become learning organisations where the rate of learning within the organisation must be equal to, or greater than, the rate of change in the external

environment." The kind of education needed today requires teachers to be high-level knowledge workers who constantly advance their own professional knowledge as well as that of their profession (Schleicher, 2012). Importantly, a growing evidence base has also shown the positive impact of teachers' professional development on students' scores (Yoon et al., 2007; Hill, Beisiegel and Jacob, 2013). This has led educators and policy makers around the world, including those of Sweden, to support the notion of investing in quality career-long opportunities for professional development.

For example, Swedish teachers report high levels of participation in various forms of organised professional development – in the range of 80% of teachers in a given year. The rate, however, is slightly below average participation rates in other OECD countries, despite the fact that Sweden has among the most generous compensation rates for time spent on professional development. TALIS 2013 also showed that slightly more than four out of ten teachers (41.5%) reported having participated in a network of teachers formed specifically for professional development during the 12 months prior to the survey, considerably above the TALIS average (31.1%). While participation rates seem reasonably high, actual sustained engagement in professional development is relatively low. By TALIS's measure of intensity of professional development (defined as the number of days of professional development over the previous 12 months), Sweden is in the lowest quartile of participating countries (OECD, 2014a).

Evidence also suggests that there is scope for improving the relevance of professional development courses and programmes offered by universities. The Swedish National Audit Office has noted the need for school leaders and teacher education universities to enhance co-ordination and collaboration to ensure that continuous professional development offerings better meet the learning needs of teachers (SNAO, 2014).

This high-participation/low-intensity pattern and the mismatch of learning needs of educators and supply are symptomatic of a highly fragmented and unfocused approach to professional development for teachers and school leaders.

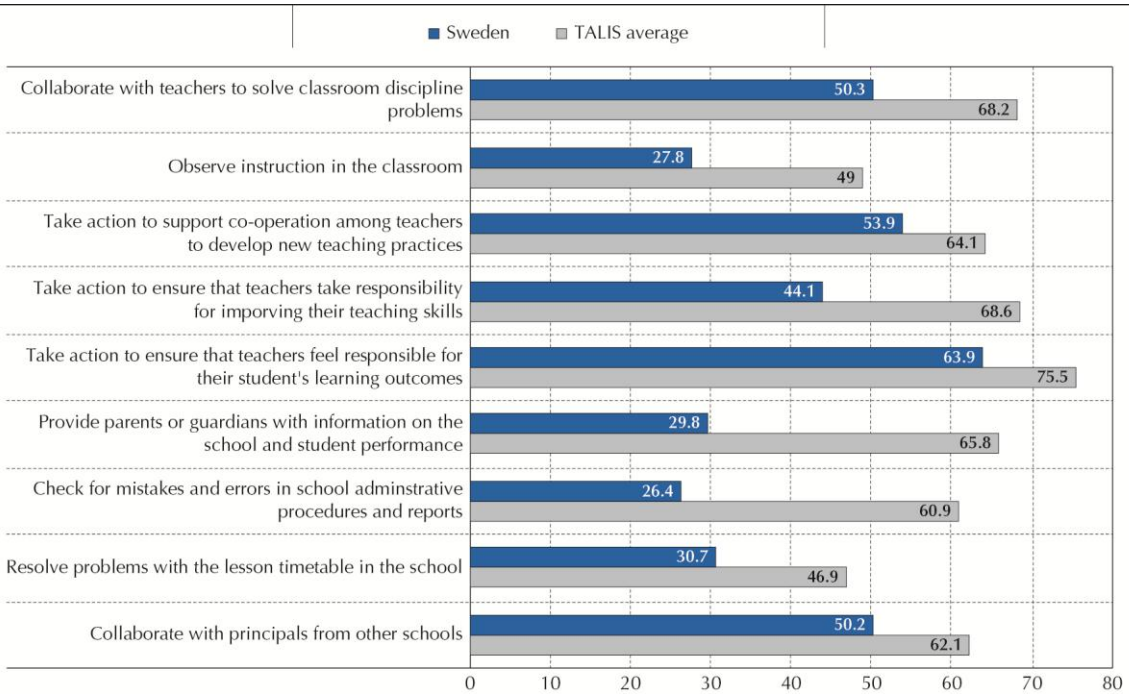
Although teachers' professional development has been mainly the responsibility of school education providers, the state has also taken a number of initiatives in this area. In recent years, the state has made big investments in teachers' professional development for example through Teacher Boost 1 and Teacher Boost 2. Although these large-scale national programmes are valuable, as noted by many of the teachers and school leaders we interviewed, the importance of improving professional development and promoting collaborative learning (which the data suggests is much needed) provides further evidence for the need to revisit the Swedish approach to human resource development in education.

School leaders need to promote and facilitate a learning culture

Research evidence shows us that school leaders play a vital role in establishing a learning culture and for promoting and facilitating continuous professional development and organisational learning (Berkowitz et al., 2013; Silins, Mulford and Zarins, 2002; Pont, Nusche and Moorman, 2008). Leaders have an important role in promoting collaboration and learning among staff. They can set the tone by encouraging teachers to co-operate with one another to develop new teaching practices and take responsibility for improving their teaching skills, and by ensuring that teachers feel responsible for their students' learning outcomes. By encouraging teachers to learn from one another, school leaders help teachers to keep their teaching methods up to date, and may also help develop more collaboration among teachers in their schools (OECD, 2014a). The creation of a learning culture requires, among other things, the reshaping of human resource

policies, including provision of time and resources for professional development and growth (Du Four, 1996; Silins, Mulford and Zarins, 2002; OECD, 2014a; OECD, 2014c).

Figure 3.5. Overview leadership activities Swedish principals, TALIS 2013



Source: OECD (2014a), *TALIS 2013 Results: An International Perspective on Teaching and Learning*, TALIS, OECD Publishing, Paris, http://dx.doi.org/10.1787/9789264196261-en.

Mitchell (1995) noted that schools should (re-) organise their schedules to give teachers time to meet and engage in collective learning. Twenty years later, that message still holds much value, particularly for Sweden. On TALIS 2013, for example, some 58% of Swedish teachers reported that their work schedule conflicts with professional development (TALIS average 51%). In addition, 35% reported a lack of support from the employer as a barrier to professional development (TALIS average 32%), and 61% noted that professional development is too expensive (TALIS average 44%). There were similar findings in an investigation on Teachers Boost 2. Apart from uncertainty about the qualification teachers would be granted for this programme, municipalities cited financial concerns and a lack of interest from principals as reasons why they have not participated in these efforts (MoER, 2015).

Evidence also suggests that many Swedish teachers work alone and are not benefiting from potential feedback and peer-learning opportunities that their colleagues can provide to improve and innovate their teaching practices (Cook and Collinson, 2013; Hargreaves and Fullan, 2012; Hattie, 2008; OECD, 2014c). According to MoER (2015): "The ambition to, via the principals' leadership, get teachers to collaborate more and pursue collegial development work to improve teaching has not succeeded as planned." The findings of our review corroborate this disappointing conclusion.

Research evidence has further shown the benefits for schools of creating wider partnerships that allow for building and maintaining the capital they need as organisations

– social capital, intellectual capital, and professional capital (Hargreaves and Fullan, 2012). Apart from collaborating with and learning from other schools, schools can benefit from the expertise of higher education institutions, businesses, foundations, families and communities, as they become real partners in teaching and learning of students (OECD, 2013b). The evidence, however, suggests that relatively few Swedish school leaders engage in such wider partnerships. On TALIS 2013, for example, the proportion of time that principals report spending on interacting with local and regional community, business and industry is very low, just 3%, the lowest among TALIS participating countries (OECD, 2014a). On this issue, the 2011 OECD report on evaluation and assessment arrangements of the Swedish school system noted the importance of external views from outside the education sector for feedback to schools to reduce the risk of the sector becoming inward-looking and self-contained (Nusche et al., 2011). Data suggests that this risk remains an issue of concern.

The relatively low emphasis on professional development and creating a learning culture in Swedish schools is also reflected in evidence on the role and work-life of school leaders. Research evidence shows that appraisal and feedback have a strong positive influence on teachers and their work (Hattie, 2008). Teachers report that it increases their job satisfaction and, to some degree, their job security, and it significantly increases the development of teachers (OECD, 2009). However, appraisal and feedback practices are underdeveloped in many Swedish schools, with principals seemingly poorly equipped for this task (OECD, 2014a). This results partly from a lack of training. The National School Leadership Training Programme (in existence since 2010) aims to better equip school leaders to exercise their responsibilities as laid down in curricula and other legal instruments, but appraisal of staff is not among the main focus areas of the programme, although it includes the development of skills for evaluation of activities and results (Nusche et al., 2011). In addition, TALIS shows that Swedish principals spend considerably less time than principals in other OECD countries supporting co-operation among teachers, ensuring that teachers take action to improve their teaching skills or observing instructional practice (Figure 3.5).

These practices are at odds with what research evidence and good practice tell us for developing a learning culture and ultimately a high-quality teacher workforce. Lack of experience may be a factor here. Compared with the TALIS average, Swedish principals have less work experience both as principals and as teachers. Another factor would seem to be the high turnover of leadership in Swedish schools, which risks disrupting any improvement effort. Research evidence clearly shows that efforts need to progress from one leader to the next and one stage to the next, rather than through wild swings of the pendulum where every leader undoes all the work of their immediate predecessors (Hargreaves and Fink, 2006).

The need for a coherent human resource strategy

Research evidence shows the importance of having a high-quality and well-motivated education workforce for improving student performance (Hattie, 2008; Hanuschek and Rivkin, 2012). The aim should therefore be to develop universal policies in order to recruit highly qualified graduates, offer continuing professional development, and ensure career advancement as well as attractive working conditions and salaries (Schleicher, 2011). This requires taking a strategic and holistic look at the professional life cycle of educators to design the policies and support structures necessary for ensuring quality and quantity of the present and future workforce.

At the most fundamental level, countries with the most successful human resource strategies, like Australia, Finland, the Netherlands and Singapore, view the development of teaching and leadership as a lifetime project, not a single event, such as initial teacher education, or a collection of disparate activities occurring more or less randomly over the course of an educator's career. They also view human resource strategies as necessarily evolving in response to changes in the knowledge and skill demands of the education sector and changing demographic and economic patterns in society at large.

This life-cycle or systemic view of human resource development acknowledges that teachers and school leaders have different needs over the course of their careers, that they grow and develop the competencies associated with their work not only as a result of their experience in the workplace, but also as a result of their access to new knowledge outside their workplace. It also acknowledges that they work in an environment in which they face constantly changing and increasing expectations and demands for professional competence in the facing of rising demands from society and increases in knowledge about effective practices.

In Sweden, such a life-cycle or systematic approach to human resource development is clearly underdeveloped. Patterns of participation in key human resource investments seem relatively low and highly variable, depending on the resource levels and dispositions of schools and municipalities in which teachers work. What teachers and school leaders get by way of access to knowledge and skills for improvement of their practice is largely determined by their individual preferences and the specific contexts in which they work, rather than by any overarching set of expectations and opportunities set by the systems in which they work.

The patterns also signal some major unexploited opportunities for development and transformation of the human resource base of the education sector. Relatively focused and specific changes, building on recent policy shifts in Sweden, could result in major changes in the composition and quality of the education workforce. For example, recent changes in the structure of credentialing for teachers (see Chapter 1) could be connected to specific knowledge and skill requirements and standards for teacher development. These could lead to a clearer set of entry requirements and competency assessments of teacher candidates and to a stronger teaching force. These focused improvements in expectations for entering teachers could be reinforced by the use of practice schools, as outlined in Chapter 1, to provide settings where experienced practitioners could be encouraged to work with new entrants to reframe the culture of teaching and expectations for student performance. In order for changes like this to happen, however, key actors at state and municipal levels have to see specific projects and programmes as part of a larger, coherent, collaborative strategy for improvement of human capital in the education system.

A significant number of education systems, operating in very diverse contexts, have made major improvements in student learning through thoughtful design of human resource models. Countries as diverse as Australia, Canada, Finland and Singapore have managed to develop and sustain large-scale human resource models as a major component of their overall teaching and learning strategies. These systems share a core set of principles:

- **Disciplined grounding of practice in research:** Typically, well designed human resource models begin from a broad-scale survey of the research base on learning, a focused set of learning goals around language, literacy, mathematical reasoning and scientific literacy, and a set of tested practices for working with teachers and

school leaders on continuous improvement of their knowledge and skills. Often, as in Australia, these research-based models grow out of a consensus-building process that involves academic researchers, teachers, school leaders, and expert consultants, and they result in materials written for practitioners and focused on key skills and knowledge required to meet a given level of practice (Box 3.2).

These frameworks or standards are integrated into pre-service teacher and school leader training programmes and form the basis for the design of career structures for teachers and/or school leaders. They are generally used to design the majority of induction, mentoring and continuing professional development opportunities for practitioners. They are not written as rules or requirements, but rather as guidance for practice, inviting practitioners to participate in continuing development. They are revised over time in response to developments in the research base on teaching and learning, and in response to feedback from the classroom and school level about their validity and usefulness. The culture embedded in these practices is one of mutually agreed-upon standards of professional practice, evolving over time in response to new knowledge, and connected systemically to the daily work experience of teachers and school leaders.

Sweden to date has not developed such national standards for education professionals to connect their professional development to the latest research evidence on effective teaching and leadership.

Box 3.2. The Australian Institute for Teaching and School Leadership

The Australian Institute for Teaching and School Leadership (AITSL) is a national, state-sponsored, professionally governed institution with overall responsibility for bringing national agreement and consensus on standards for initial training and professional development of teachers and school leaders. Its mission statement reads: "The Australian Institute for Teaching and School Leadership has been established to provide national leadership for Australian, state and territory governments in promoting excellence in the profession of teaching and school leadership."

The Institute's role is to:

- Develop and maintain rigorous Australian professional standards for teaching and school leadership.
- Implement an agreed system of national accreditation of teachers based on these standards.
- Foster and drive high quality professional development for teachers and school leaders through professional standards, professional learning and a national approach to the accreditation of pre-service teacher education courses.
- Undertake and engage with international research and innovative developments in best practice.
- Work collaboratively with government and non-government school systems, key stakeholders including professional associations and education unions, teacher educators, business and school communities, the Australian Curriculum Assessment and Reporting Authority and Education Services Australia.

Box 3.2. The Australian Institute for Teaching and School Leadership (continued)

- Fulfil the role of assessing authority under the Migration Regulations 1994 for the purposes of skilled migration to Australia as a pre-primary, primary or secondary school teacher (see www.aitsl.edu.au/about-us/mission).

An important part of AITSL's role is to convene key constituencies, review research, and publish frameworks describing the consensus view on specific issues of initial education and professional development for teachers and school leaders. Among its most important outputs are the *Australian Professional Standards for Teachers.* These teacher standards provide benchmarks to recognise professional growth of teachers throughout their careers. The descriptors across the four career stages represent increasing levels of knowledge, practice and professional engagement for teachers. Progression through the stages describes a growing understanding, applied with increasing sophistication across a broader and more complex range of situations. For example, in the first standard, "Know students and how they learn", in the focus area of physical, social and intellectual development and characteristics of students, the following standards are identified:

- *Graduate* – demonstrate knowledge and understanding of the physical, social and intellectual development and characteristics of students and how these may affect learning.
- *Proficient* – use teaching strategies based on knowledge of students' physical, social and intellectual development and characteristics to improve student learning.
- *Highly Accomplished* – select from a flexible and effective repertoire of teaching strategies to suit the physical, social and intellectual development and characteristics of students.
- *Lead* – lead colleagues to select and develop teaching strategies to improve student learning using knowledge of the physical, social and intellectual development and characteristics of students.

Source: AITSL (Australian Institute for Teaching and School Leadership) website, www.aitsl.edu.au/; AITSL (2012), "Standard 1: Know students and how they learn", www.teacherstandards.aitsl.edu.au/DomainOfTeaching/ProfessionalKnowledge/Standards/1.

- **Coherent connections to existing assessment and curriculum guidance:** Another key element of benchmark systems is that their human resource development models are closely aligned with assessment and curriculum guidance systems. For example, professional development for experienced teachers and mentors is aligned with the curriculum and pedagogical frameworks and assessment systems in common use in the overall system. The point of this alignment is to avoid overloading practitioners with disparate, random, often conflicting messages about the goals and purposes of the guidance from the system level, and to provide stability and focus for knowledge and skill development that will be immediately useful in the classroom.

  One example is the Pedagogy and Content Routine (PCR), a "kernel routine" developed by the University of Pittsburgh focusing on direct improvement of teaching and learning through content-based professional development within school subjects (McConachie and Petrosky, 2010). Designed as a direct route to implementation of innovative instruction, the PCR is a highly participatory training routine for teachers and coaches that is specific to the demanding programmes they are expected to teach and centres around a continuous cycle of observation and professional learning. It meets six criteria critical to such routines. First, it is centred on the technical core of teaching and learning. Second,

it is anchored in the official curriculum of the school and the enacted curriculum of the classroom. Third, it uses principles of learning and disciplinary literacy, and model lessons that are all based on research. Fourth, it builds trust and mutual access among staff and provides safe venues for educators to work with new practices. Fifth, it provides a route by which new knowledge can enter a school's practice through training, observation and discussion. Sixth, it can be tailored by school staff and transformed over time – the "kernelling" aspect (Dumont, Istance and Benavides, 2010).

In an effort to lay the seeds or kernels for such curriculum-based content-based professional development practices to flourish across the Swedish school system, the government has, as mentioned, put in place a number of large-scale continuing professional development initiatives for teachers. For example, Mathematics Boost and Reading Boost are two in-service training initiatives in the didactics of their respective subjects, with trained supervisors, online support and a focus on peer learning. The National Agency for Education also recently started providing teachers and principals with an open online course (MOOC) in assessment practice, built on collegial learning.

- **Integration of professional learning into daily work:** Highly successful benchmark systems put the majority of professional development resources as close to the point of use as possible. Rather than loading information into large-group lecture settings with little connection to practice, these systems push the resources into direct provision of mentoring, networked observation and analysis of instructional practice by teachers and leaders, and co-teaching experiences which occur in the workplace of educators. In these systems, teachers are seen as learners in which the practice of research and reflection as a form of professional development is integral (Elmore, 1995; Elmore 2006; OECD, 2011b; OECD 2014a; OECD, 2014c).

  In Singapore, for example, teachers are entitled to 100 hours of professional development each year. The majority of professional development is provided on-site in the schools where teachers work, and is directed at the specific goals and problems teachers and school leaders are addressing in those schools. Each school has a fund for professional development that it can use to address specific knowledge and skills needs.

  As discussed, the degree to which Swedish teachers are adequately supported in their professional development is highly variable. In many cases, there is little opportunity for teachers to engage in continuous professional learning about their practice, observing and being observed by their colleagues in their own classrooms and other teachers in their own schools and others who are confronting similar challenges. Part of the challenge is that the leadership of many schools is not sufficiently focused on pedagogical issues and does not recognise the importance of professional learning of individuals and groups of teachers as a key component of their daily work.

- **Inquiry, experimentation and development of outliers:** Benchmark systems encourage highly knowledgeable and skilled practitioners to push against the edges of conventional teaching and learning practice. High-performing schools are encouraged to push beyond their best practice and to challenge their beliefs about what children can learn. Schools and research organisations are encouraged to incorporate new research into their existing designs. Systems encourage the

development of new models of instructional practice based on experience and new research. In Japan, for example, many teachers engage in research-based professional development activities through highly structured processes that include observing and commenting on colleagues' classes, known as lesson study. As a result, many Japanese teachers have focused on exploring problems of practice together, and schools in many other countries have been inspired to adopt similar practices (OECD, 2011a), including Sweden (Cheung and Wong, 2014; Dudley, 2014; Po Yuk, 2011). The professional learning promoted by the National Agency for Education through its further education efforts, the so-called Boosts (e.g. Teacher Boost, Mathematics Boost) also has its roots in lesson study and learning studies.

The evidence, however, suggests that much scope remains for enhancing the use of lesson study and other similar research-based methods to enhance professional development of Swedish educators and ultimately educational practice. In 2007, the Swedish National Agency for School Improvement noted the weak tradition in Swedish schools, among both teachers and school leaders, to follow developments in the field of educational and school management research. This goes back to the institutions that educate teachers. Historically many teachers working in these university colleges are good practitioners but have little experience of conducting their own research. The Agency noted that one of the challenges in the Swedish school system is to create a better understanding among politicians, school leaders and teachers that a prerequisite to moving forward to improve the quality of Swedish schools, is to devote much more money and time to educational research (National Agency for School Improvement, 2007).

This assessment still holds much ground. Although the government has established a School Research Institute with the mission to compile, carry out and disseminate research related to effective teaching methods and approaches for teachers and preschool teachers (Eurypedia, 2014), evidence, including that from our review, suggests that the importance of investing in educational research for improving the teaching and learning remains under-recognised by many municipal leaders, school leaders and owners of independent schools. This while research evidence shows that such research-based practices and professional learning communities, if adequately supported and nurtured by the school and the system, can enhance school-wide knowledge processes and improve schools' capacity for organisational learning (OECD, 2014c).

For this to happen, research evidence also shows the importance of recognising people for taking initiative and supporting calculated risks (Bowen, Rose and Ware, 2006; Watkins and Marsick, 2003; Silins, Mulford and Zarins, 2002). School leaders and school structures need to support experimentation so that teachers feel valued and rewarded for taking the initiative. It is important for all professionals in schools to keep an open mind about new ways of doing things, feel free to experiment and have the courage to make mistakes and to learn from them (Bowen, Rose and Ware, 2006). Many scholars consider this tolerance of error and encouragement of experimentation to be the backbone to problem solving, along with an inquiry-based mind set which is key for creating a learning organisation geared towards continuous change and innovation, and ultimately improvements in the learning of educators and students alike

The findings of our review lead us to conclude that there is much scope for improving conditions in Swedish schools so teachers and school leaders are encouraged to experiment and push forward the edges of conventional teaching and learning practice. Education providers (municipalities and owners of independent schools), the government and other important partners, such as universities, have important roles to play in making this happen.

As noted earlier, Sweden's various policy efforts to address the central problems of human resource development are an initial entry point that must lead to a broader, more coherent human resource development strategy. These benchmark practices can serve as guidance for a clearer human resource development model more specifically tailored to the specifics of the Swedish context. If the large turnover in human talent in the school system expected in the decade of 2020-30 is addressed with the existing set of institutional structures and programmes, there is little reason to expect major improvements in the quality and coherence of teaching and learning in the system. If this turnover is viewed as an opportunity to build a new, more coherent approach to development of human talent in the education system, it could be the turning point for the sector. The way forward must involve a more ambitious and coherent approach to human resource development.

Recommendation 2: Develop a long-term human resource strategy for high-quality teaching and learning

Sweden faces a serious deterioration in the quality and status of the teaching profession in the face of major social, economic and demographic changes. Within these challenges lies a major opportunity: the human resources of the school sector will undergo a major turnover in the next decade or so, making possible a major shift in the culture, practices, and results of the education system. Meeting this challenge can only be accomplished by **building capacity for teaching and learning through a long-term human resource strategy for the school sector** that forms an integrated part of an overarching school improvement strategy to move the system towards educational excellence (see Chapter 4).

This human resource strategy needs to be grounded in a stable set of principles and a tighter relationship between research and practice, taking its point of departure from what we currently know with some degree of certainty about what works in promoting high quality teaching and learning. We know, for example, that initial recruitment and selection of teachers is a critical systemic function that cannot be left to the vicissitudes of random labour markets, that investments in teacher quality are a lifetime project that begins with selection and induction but must continue over the course of an educator's entire career, that quality in teaching and learning requires integration of research and practice at the system, school, and classroom levels, and that the most effective investments in continued learning occur in an organisational climate of collaboration based on leadership models that value problem-solving and mutual trust.

We propose three major changes in policy and institutional structure to begin the process of forming and enacting a new human resource strategy:

Policy action 2.1: Create a National Institute for Teacher and School Leader Quality

Sweden should **create a publicly-funded National Institute for Teacher and School Leader Quality** that brings together members of the research community, representatives of the practitioner community, and representatives of major governance organisations. The main first task of the Institute should be the **development of a human resource strategy for the school sector**, focusing on recruitment of talent and professional growth of teaching and leadership in the education sector through research, standards and national and international benchmarks.

A common characteristic of the OECD benchmark systems is that they all have some form of institutional structure that focuses continuously on gathering and applying current knowledge and research around teaching and learning into a useable form, developing consensus guidelines and frameworks around effective practices for practitioners to use in planning and enacting professional development activities, and aligning these frameworks with the broader policy guidance contained in curriculum, assessment, and evaluation policies at the national level.

We envision that the National Institute for Teacher and School Leader Quality would be composed of a representative advisory board, that it would have a relatively small permanent staff, and that it would have a significant budget to draw on expert national and international research advice, to convene practitioners and experts to develop guidance and frameworks based on strong empirical evidence, and to periodically review the usefulness and impact of national guidance on curriculum and assessment. We envision that most of the work in developing frameworks, convening experts and practitioners, and evaluating the impact of national guidance would be done under contract with external providers, rather than directly by staff of the institute. Strategically, it is important to maintain a high degree of institutional agility in responding to emerging human resource demands in the education sector, rather than being constrained by the need to maintain a large, permanent executive staff.

We also envision that an early task for the National Institute and its board would be to review the current state of initial teacher education in Sweden and make recommendations for consolidation or reorganisation of teacher education programmes in accordance with an overall set of guidelines on how to meet emerging demands for knowledge and skill in the sector. This task should have a special sense of urgency, since immediate decisions about initial teacher education (or failure to make those decisions) will have long-term effects as the composition of the teaching force changes.

The fundamental challenge here is how to create consensus among the research, practice, and governance communities on a coherent human resource strategy in an institutional structure that, in its highly decentralised state, can be inconsistent and sometimes incoherent. We recognise that fundamental changes in the current governance structure are unlikely, at least in the near term, and that it is consistent with Sweden's consensus-building structure to work on the development of common guidelines and strategies in a highly decentralised model. But we also note that a large part of the problem facing Sweden in the education sector is a consequence of its failure to bring coherence and focus on human resources to its highly decentralised system. The fundamental problem is how to introduce a higher degree of professional consensus and guidance on human resource issues in this decentralised system. Sweden, along with other Nordic countries, has a long tradition of fundamental reform through consensus-

building and this tradition can be a valuable asset in this domain. Our aspiration is that the National Institute for Teacher and School Leader Quality can serve as the focal structure for such development.

We also recognise that the current government has proposed a national council (commission) to study and make recommendations to transform the education sector. Our proposal envisions a different, complementary type of organisation. The National Institute would be a stable body with general responsibility for integrating research and practice and for assuring that guidance and frameworks speak to the needs of practitioners, rather than an overarching body with a fixed term, designed to focus attention on the next generation of reforms. For an example, Sweden may look to Australia where the Australian Institute for Teaching and School Leadership was established in 2013 (Box 3.2).

Policy action 2.2: Review the number and quality of existing providers of teacher education

An early task for the National Institute for Teacher and School Leader Quality would be to **review the number and quality of existing providers of teacher education**, taking into consideration reports from the Swedish Higher Education Authority. The institute should develop specific guidelines and frameworks for what constitutes high-quality initial training and continuing development of educational practitioners.

The institutional structure of the school system in Sweden, the state of initial education programmes and provision of continuing support for practitioners generally reflect the structural incoherence of the education sector. Municipalities vary widely in their capacity to develop and manage human resources within their jurisdictions. Teacher education programmes have been developed in institutions with primarily local and regional constituencies, seemingly without an overall vision for how they contribute to the quality and emerging demands of the sector. Schools are more or less on their own in terms of expectations for how – or whether – they use the resources available to them.

In this context, it is difficult to imagine that sustaining 28 higher education institutions that provide teacher education programmes, operating as largely autonomous providers, will produce a coherent and effective human resource strategy. On the other hand, these programmes have valuable resources and expertise to bring to the task of crafting an effective strategy. Likewise, it is difficult to imagine how the vast majority of small municipalities can muster the resources to mount and sustain strong induction, mentoring, and professional development systems without some over-arching support from the national level. Significant expertise exists at the municipal level in jurisdictions that have focused on developing focused and coherent human resource models. The problem is how to use this expertise in the broader system, where municipalities do not always have adequate resources for the task on their own.

The current approach to selecting and developing human talent in Sweden will not get the education sector to the level of student performance to which it aspires. As the first step in building an overall human resources strategy for the sector, we recommend a thorough review, initially of the capability, focus, and resources in existing initial teacher and leadership education programmes in Sweden. The review should explicitly address the issue of whether the existing number of initial programmes and their substantive focus respond to current and future needs of the education sector. It should also focus on the systemic problem of how smaller municipalities can meet the increasing demands of

human talent development and the role of the national government in addressing this problem. As noted above, we would locate responsibility for this review with the National Institute for Teacher and School Leader Quality.

Policy action 2.3: Improve the attractiveness of teaching and school leadership

Finally, we recommend policy action on **improving the attractiveness of teaching and school leadership** through:

- Raising salaries as part of larger effort to create a well-designed career structure that recognises and challenges educators throughout their careers.
- Developing professional standards as a foundation for the career structure.
- More selective entry into teacher education programmes.
- Continuous professional development of educators as the basis for school improvement efforts.

Sweden faces a major challenge with the confluence of two major developments: 1) an emerging shortage of qualified practitioners, partially resulting from an aging teaching force, coupled with 2) the declining attractiveness of teaching as an occupation among university enrolees and in society at large. As noted above, this problem also presents a major opportunity for a complete transformation of the Swedish school sector through development of a strong human resource strategy.

In some ways, policy responses to these shifts are obvious. Our analysis leads us to conclude that remuneration of Swedish teachers and school leaders should be reviewed in order to draw the best people into the profession and keep them there. While recruitment and retention are not only a matter of salary, better remuneration would help boost the status and attractiveness of the education profession in Sweden, by making teaching a competitive profession in relation to career opportunities available to highly qualified university graduates in other sectors of the economy.

But competitive compensation is only part of the equation. Quality initial and continuous professional development, career prospects, career diversity, and giving teachers responsibility as professionals are also important elements for retaining qualified and motivated staff and ensuring they are challenged throughout their professional lives. Sweden should continue its initial efforts to develop and work towards a well-designed career structure for teachers and school leaders, one that would also ensure that professionals at intermediate and advanced stages of their careers are recognised and sufficiently challenged to continue to give their best.

For this to happen, Sweden should develop quality standards for teachers and school leaders that are explicit in terms of required knowledge and skills, and are internationally benchmarked. These have to be integrated into initial teacher and leadership programmes and into norms and processes of assessment and evaluation in the workplace (e.g. appraisal and school self-evaluation). In addition, these programmes have to raise entry standards to reflect the increased knowledge and skills required to function effectively in the education sector.

Finally, practitioners in the sector have to have access to the resources and professional development necessary to improve their skills over the course of their careers. These components of a human resource strategy are obvious and fundamental.

A more difficult issue, however, is the cultural problem underlying the general lack of attractiveness of work in the education sector and its influence on prospective practitioners and the public's view of the sector in general. Sweden has seen a relatively steep decline in the status of the education sector in recent years. The causes of this decline are multiple and difficult to parse. The path out of the decline will not be easy, nor will it be remedied by something as simple as a public relations campaign to try to change attitudes of prospective teachers, leaders, and the public at large.

The sector overall, including professional associations, university researchers, municipal officials, and experts in learning and teaching must be seen to be doing important consequential things to improve the expectations of work in the sector, the quality of the work, the intellectual and practical challenges of the work, and the conditions and career opportunities presented by the work. It will not be enough simply to change policies and institutional practices. People with responsibility in the sector must be seen to be doing these things in highly visible ways; selectivity of entry to the sector must be made visible to prospective entrants and the public at large; and the workplace changes that accompany transformation of the sector must be made visible and accessible to the public. Transformations of status among competing occupations and professions do not occur by exhortation; they occur through changes in the actual institutions and work processes, the knowledge and skill requirements, and the selectivity of entry to occupations.

Improving the status of the education profession is a national problem requiring national solutions. Whether the national focus occurs through direct control (unlikely given the present political situation in Sweden) or through the use of convening authority and the creation of consensus guidelines and frameworks that are self-imposed by constituent groups, there must be some mechanisms for developing national consensus on the importance of quality in the education sector.

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Chapter 4:

Steer policy and accountability focused on improvement

This chapter reviews the challenges and opportunities for steering policy and practice, and for holding people accountable for their actions with a focus on improvement, in the context of a complex, decentralised school system that aims to steer through outcomes.

In recent years, the Ministry of Education and Research initiated a number of reforms, including a review of the Education Act to clarify roles and responsibilities, implementation of a new curriculum, national tests in Years 3, 6 and 9 and a new grading scale. Several challenges remain, including a lack of coherence in Sweden's reform efforts, variable capacity at local level depending on the size of municipalities, an imbalance in accountability and local autonomy, a lack of clarity in responsibilities and differing interpretations of education priorities at various levels of administration. Sweden's evaluation and assessment arrangements are underdeveloped, with unreliable national student achievement data, and hence cannot adequately support accountability and improvement.

Sweden needs to strengthen policy steering by establishing clear accountability focused on improvement. We propose a set of concrete policy actions: 1) together with key stakeholders, define a set of ambitious education priorities; 2) develop a comprehensive national school improvement strategy; 3) strengthen school self-evaluation and planning through an agreed set of indicators; and 4) strengthen the Swedish Schools Inspectorate to shift from a culture of administrative compliance to responsibility for improvement.

Recommendation 3: Strengthen the steering of policy and accountability with a focus on improvement

As part of the national agenda to raise the quality of school education, steering of policy and establishing accountability should be clarified and strengthened to have a more direct focus on improvement.

Systems of steering and accountability are strongly influenced by history, culture and politics, and by evidence or perceptions about the quality of the education system. There are no universal models that are generally applicable. However, particularly since the latter part of the last century, important trends can be identified that have changed the educational landscape in Sweden.

Internationally, from the early 1980s onwards, there has been a movement towards devolving decision-making authority to lower levels in the education system, leading to varying degrees of school autonomy. Before these moves to decentralise, decisions about classroom practice were traditionally largely the preserve of teachers, with only Greece, Luxembourg and Norway seeking to influence teaching practice directly at the national level. In most countries, decisions about provision, including staffing and resources, were largely taken centrally. The extent of national intervention in determining what should be taught in schools in the form of the curriculum was often a reflection of historical and cultural tradition.

Devolution of decision-making has often been accompanied by a strengthened central role in setting broad national expectations through the curriculum and more developed performance monitoring through various forms of assessment and evaluation. In the United Kingdom, for example, a traditionally very decentralised, almost *laissez-faire*, approach was replaced in 1988 in England, Wales and Northern Ireland with a prescriptive national curriculum defined in statute. More recently, however, OECD statistics suggest that the trend towards devolving decision-making to the school level has levelled out or even been reversed (OECD, 2012). England, Estonia and the Netherlands remain the most decentralised countries in terms of decision-making.

Below the national level, the balance between schools and municipalities in decision-making capacity and responsibility varies from country to country. In some countries like Denmark, Finland, Iceland, Japan, Norway and Scotland, local government retains a strong decision-making and management role. In others, such as the Flemish Community of Belgium, the Czech Republic, England, the Netherlands and New Zealand, schools have a stronger role in shaping much of what they do. National influence, however, can still be felt in the ways in which municipalities and schools are financed.

Variations amongst countries notwithstanding, the general trend, since the mid-1980s until relatively recently, has been towards decentralisation as a means of enhancing local responsiveness, encouraging creativity in the use of resources, promoting innovation and creating incentives for quality improvement (Waslander, Pater and van der Weide, 2010). Decentralisation increases the complexity of the task of central steering of education policy. The challenge is to strike a constructive balance between national consistency and local creativity and responsiveness.

A further significant reform to education systems in a number of countries, again dating from the 1980s, was to encourage greater diversity in the types of school and to

introduce the possibility for parents to choose the school their children attend. The aim was to give parents and students more control over how their educational wishes and needs are met and, in so doing, to force schools to compete to attract students. It was expected that increased competition would boost innovation and diversity of provision and also drive up quality. However, competition among schools can also create a potential disincentive to engage in the kind of school-to-school and teacher-to-teacher collaboration that can be an important element in educational improvement (OECD, 2014a). In practice, the extent to which the presumed benefits of school choice have been achieved remains unclear.

In many ways, Sweden has been at the forefront of the international trend towards decentralisation, greater school diversity and wider parental choice. Sweden's reform programme over the last 25 years has moved the country from a highly centralised system to a highly decentralised system. The intertwined effects of decentralisation and school choice, together with the creation of state-funded independent schools, fundamentally changed the nature of the education system. Taken separately and as a whole, the new steering and accountability policies and processes have had profound implications for national and local government, for schools and teachers, and for students and their parents or carers.

While there are clear and continuing strengths in Swedish education, not least in the strong policy support for the goal of achieving a high-quality education system for all young people, the reforms continue to pose significant challenges for the Swedish school system and improving the performance of its students.

Decentralisation and the challenge of steering through objectives

Prior to 1990, in Sweden's highly centralised and uniform education system, central government set out its requirements in regulations, employed teachers and principals, and financed schools through a system of grants administered by county-level education boards (MoER, 2015). However, in common with trends internationally, the period since the 1970s saw increasing concerns about the efficiency of the public sector in Sweden and the thrust of the policy debate moved towards the need for much greater decentralisation.

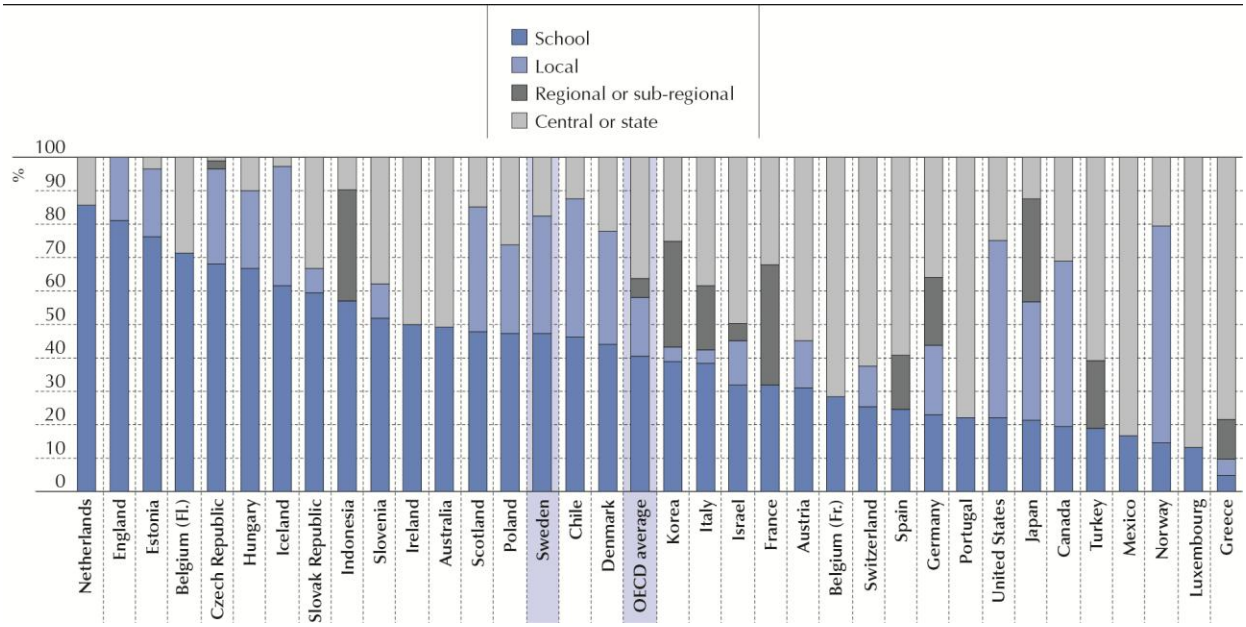
In 1988 the government developed a steering proposition followed by a series of reforms that brought about radical changes to the ways in which the system was steered and held to account. Under the 1989 Municipal Education Act, most responsibilities for school and adult education were shifted to municipalities as part of a process of decentralisation that aimed to make the school system more locally responsive.

The decentralisation policy followed the principle of subsidiarity by allowing much greater freedom in decision-making at local levels and only prescribing broad goals at the national level. In doing so, it sought to establish clear divisions of responsibility, more efficient use of resources and a shared understanding of purposes with the aim of improving achievement of national goals through greater local participation.

As a result of the move to decentralisation, national steering of education in Sweden is now based on broad direction from the state in pursuance of the requirements of the 2011 Education Act, supported by the work of national bodies such as the National Agency for Education and the Swedish Schools Inspectorate. Direction takes the form of setting goals for the system and monitoring their implementation. The central steering is then interpreted and elaborated by the 290 elected municipalities that have their own

democratic legitimacy and mandate, as well as by the approved private organisers of independent schools. An 2011 OECD survey suggested that 18% of decisions in Sweden were taken centrally, 35% locally, and 47% at school level (Figure 4.1.). These compare with an OECD average of 36% nationally, 17% locally and 41% at school level (with 6% taken at various intermediate levels between central government and municipalities). In other words, Sweden has embraced decentralisation to a greater extent than most other OECD countries.

Figure 4.1. Percentage of decisions taken at each level of government in public lower secondary education (2011)



Note: Countries are ranked in descending order of the percentage of decisions taken at the school level.

Source: OECD (2012), *Education at a Glance 2012: OECD Indicators*, OECD Publishing, Paris, http://dx.doi.org/10.1787/eag-2012-en, OECD, Table D6.1, see Annex 3 for notes.

The Ministry of Education and Research (MoER) is relatively small, reflecting longstanding practice in Sweden of steering at the national level, operating through independent national bodies that are outside the ministry but have clearly articulated roles in promoting national policy objectives. The National Agency for Education (NAE) was created as an independent agency in 1991, with an initial role of disseminating knowledge and information. However, its mission has grown over time and it is now involved, on commission by the government, in setting national goals, including curriculum and assessment requirements that are centrally driven and defined in statute. The NAE also gathers and analyses data about the education system and issues reports.

There is no intermediate regional or county level in Sweden responsible for compulsory education (see Chapter 1). The 290 municipalities (and independent school providers) are responsible for school provision and allocation of resources. They are charged with ensuring that national goals and requirements are met, but have freedom to determine how that might best be done in relation to local needs and circumstances. They are responsible for providing the conditions within which schools can best work towards achieving national goals.

Table 4.1. Overview of key stakeholders in the Swedish school system

Stakeholders	Role/interest	Examples of interventions
Ministry of Education and Research	Responsible for the overall quality of education.	• Development of national education policies and legislation. • Development of financing of funds and other supportive measures. • Development of evaluation.
National Agency for Education	Actively works on attainment of goals in the Education Act, curricula and syllabi in order to improve quality and outcomes.	• Supervision, support, follow-up and evaluation of preschools and schools. • Organising training programs for school leaders and teachers. • Responsible for school and preschool statistics. • Registration of teachers and preschool teachers. • Power to stop state grant funding to principal organisers.
Schools Inspectorate	Supervisory responsibility for preschools and schools as well as adult education.	• Ensures that municipalities comply with legislation and other provisions applicable to their activities. • Provides qualitative feedback to schools. • Approves applications and grants for independent schools. • Hosts the Office of the Child and School Student Representative (BEO). • Hosts the Teachers Disciplinary Board. • Power to fine and close schools.
National Agency for Special Needs Education and Schools	Ensures that children, young people and adults – regardless of functional ability – have adequate conditions to fulfil their educational goals.	• Special needs support. • Education in special needs schools. • Accessible teaching materials. • Government funding.
Municipalities and private school organisers (municipal assembly, executive committee, education committee & education department; board for private school organisers)	Responsible and accountable authorities for the educational quality of preschools and schools as well as adult education.	• Comply with the legislation. • Resource allocation to schools to improve the quality of education. • Hire, professionalise, set wages for and lay off school-leaders, teachers and other personnel. • Set the organisational structure to achieve national goals – systemic long-term strategic thinking. • Follow up and evaluate – systematic school development work.
Principals	Responsible for pedagogical leadership to improve the quality and organisation of the school.	• Comply with legislation. • Internal quality monitoring for school improvement. • Managing the day-to-day business of the school.
Teachers	Responsible for the quality of education (knowledge and values) in the classroom.	• Develop methods to improve teaching; take part in new research. • Communication with students, children and parents.
Parents		• Contact with teachers.
Children and students	Responsible for their own learning.	• Participate actively in school.

Source: Blanchenay, P., T. Burns, and F. Koester (2014), "Shifting Responsibilities: 20 years of Education Devolution in Sweden: A Governing Complex Education Systems Case Study", *OECD Education Working Paper*, No. 104, OECD Publishing, Paris, http://dx.doi.org/10.1787/5jz2jg1rqrd7-en.

Municipalities have considerable control over the provision in public schools. They have responsibility for setting local priorities, resourcing schools and employing teachers, including conditions of employment and determination of salaries (from 1996). General state grants, initially earmarked for school funding but from 1993 part of a general grant, are allocated to municipalities which then have power of decision over their use and allocation to schools or for other purposes.

Swedish schools nowadays have a high degree of autonomy concerning the allocation of recourses, however, some areas of policy have remained the prerogative of the central government. Notably, schools in Sweden tend to have lower levels of autonomy over curricula and assessments than on average across OECD countries (OECD, 2013b).

Van Twist et al. (2013) have noted that "one of the crucial questions for OECD countries is how their increasingly complex education systems can achieve national objectives". In Sweden, an integral part of implementation of the decentralisation policy lay in the move to a management-by-objectives approach to system direction, management and monitoring. The use of management by objectives in some form grew in popularity in the 1980s and has been employed as an increasingly common approach to performance management across many OECD countries. In Europe, for example, countries using this approach have included Austria, the Flemish Community in Belgium, Denmark, Finland, France, Germany, the Netherlands, Norway and the United Kingdom (Mosley, Schutz and Breyer, 2001).

The outcome-based framework in Sweden provides a potentially strong basis for local policy and practice and for an effective evaluation and accountability system. However, the approach presents a number of challenges if it is to achieve the intended improvements in public sector performance. To reduce potentially unhelpful variability in quality and promote consistent and coherent practice, it will be critical to ensure clarity of the mandates of the main actors in the decision-making process (from state to classroom), secure their acceptance of the legitimacy of that direction and establish mutual understanding of inherent constraints. Is the central direction from the state clear and realistic? Do local authorities understand and accept the key elements of that central direction and their role in helping to take it forward in ways that promote effective action by their dependencies, principals and teachers? Do principals and teachers have a clear understanding of what is expected of them and have the capacity to fulfil these expectations? Does autonomy lead to relative isolation?

A review undertaken by the NAE in 2011 highlighted a number of significant difficulties associated with the way decentralisation has developed in Sweden (NAE, 2011a). The report identified concerns about the speed of the 1990s reforms, variability in interpretation of national goals, the emergence of additional and often competing local priorities, variability in local organisational effectiveness, and capacity problems relating to the size of municipalities and the ability of schools to meet expectations. Evidence gathered in the course of this review as well as a recent national review, *The Government Must not Abdicate* (*Staten får inteabdikera*), confirm such difficulties (SOU 2014:5) (see also Chapter 1).

A piecemeal approach to education reform

In response to the downward trend in student performance, as noted previously, the Swedish government has implemented a considerable number of reform measures in recent years. The revision of the Education Act, a new curriculum, national tests for Years 3, 6 and 9, a new grading scale, obligatory registration of new teachers and the

initial teacher education reform are among a series of reforms adopted in recent years to tackle Sweden's main challenges. There appears to be general support among the profession and other key stakeholders for these reforms and policies, yet evidence also suggests that not all municipalities and schools are equally responding to the reforms.

While these are key reforms, they have been introduced in a somewhat piecemeal approach that seems insufficient to target the significant challenges facing the Swedish school system. The considerable drop in student performance together with data pointing towards rise of student truancy, worsening of school disciplinary climates, high turnover of school leaders, and other data call for a more critical and strategic approach to school improvement.

Sweden is currently lacking the strong reform effort required to reverse the trend and bring about system-wide change. Research evidence has shown the benefits of developing a coherent education strategy to deal with various components of a system needing improvements, over time and in a focused manner (OECD, 2010a; OECD, 2011). Currently in Sweden, reforms and policies are implemented by different actors, rather independently of one another. With this approach and in a context of strained capacity, in particular in some of the smaller municipalities, there are risks of limited or partial implementation of reforms.

Municipal leaders and administrators have noted that they consider the national goals too broad to inform them in their planning. Although the 2011 revision of the curriculum responded to these concerns to some degree, a lack of clarity on national goals or priorities in combination with sometimes limited resources and various challenges to improving student performance have led to a lack of action and a high degree of autonomy for teachers and schools, without enough support.

Variable capacity to steer education across the system

Centrally-defined goals, as expressed in the national curriculum and syllabi, are interpreted and developed at successive levels of the education system. The challenge is to define national goals that are broad enough to allow for local interpretation and adaptation while remaining specific enough to maintain common overall direction. Each level in the system must feel committed to the goals and understand their significance. There is a risk that overly-detailed national prescription can stifle local ownership and creativity, but there is equally a risk that the extrapolation from national to local and school levels can lead to distortions of the original intentions and introduction of additional elements that detract from achieving them. Wide variations can emerge in the application of national policy, particularly in the context of mixed public and private sector governance.

The national agenda can become diluted if the scale of demands on those responsible for delivery is perceived to be unrealistic. National expectations can often multiply without a clear understanding of the implications for capacity to respond to successive demands, individually and collectively.

The evidence from our review suggests that the growing number of national initiatives is leading to overload and some confusion of priorities. The NAE responds to directives from the MoER, and there is a strong perception that insufficient attention is being given to assessing the implications of multiple, *ad hoc* initiatives for implementation at municipal and school levels. There is a real risk that the power of national expectations is being diluted and their impact at school level consequently

diminished. Individuals and organisations at all levels in the Swedish school system expressed concerns about initiative overload. Reaction to political pressures and to evidence about emerging issues and needs led to an unintended and disjointed build-up of pressure as these fresh expectations filtered through the system.

Another result of the extended chain of decision-making in Sweden is uneven alignment between national, local and school levels. Municipalities and school organisers formulate educational plans for schools, but principals and teachers consistently reported frustration and tension arising from what they saw as a confusing and inconsistent political and resource environment. Principals reported that they were struggling to cope with their dual responsibilities to the municipality on the one hand and to nationally defined goals on the other. Most saw their prime responsibility as being to meet national expectations expressed in law and in the work of the NAE and the Swedish Schools Inspectorate. Yet their most immediate point of reference lay in their municipality, where local priorities are set and their funding is determined. The high turnover of principals may in part reflect pressures arising from these tensions.

The NAE has also highlighted significant differences between municipalities in how resources are allocated to schools (NAE, 2009), and principals reported that the implications of national goals were not consistently reflected in the resources provided to them or to teachers for professional development. This is a reflection of choices by the municipal leadership, but also relates to the lack of capacity of some municipalities to effectively manage their local education systems.

One of the areas where this is manifest is the lack of systematic use of assessment for continuous improvement. Reports suggest that spending choices are based on simple comparative measures or pressure from the media and parents rather than on evidence-based assessments. Important decisions are often taken at the higher level of the municipal hierarchy on the basis of over-simplified evidence, with little input from principals and education experts, who may have more appropriate knowledge of education in general and of conditions in the municipality's schools (NAE, 2011a; Blanchenay, Burns and Koester, 2014).Various studies have pointed to the capacity challenges some municipalities face (particularly smaller municipalities), to effectively drive and manage their local education systems (see Chapters 2 and 3).

From a national perspective, the culture in Sweden's schools that was traditionally based on trust has become focused more on administrative compliance with direction from above than on ensuring and improving the quality of students' educational experience. The teachers and school leaders we interviewed repeatedly mentioned the heavy administrative reporting that municipal leaders require without always being clear about the use of such reports. Also, various studies point towards the pressures school leaders face when local and national priorities are not aligned. A lack of trust between municipal leadership and school leaders is mentioned as one of the main reasons for high turnover of principals (Blanchenay, Burns and Koester, 2014; MoER, 2015).

The challenge is to release energy and creativity at the local level in ways which remain true to the central mission but foster a sense of collective ownership, particularly among those working directly with young people in schools. Early experience with goal setting confirmed the need to be clear and explicit. The 1994 national curriculum set out overall learning goals for all students and gave schools and teachers a large degree of scope to determine specific content and teaching and learning approaches. But subsequent experience highlighted the weaknesses of this very loose approach and, in 2011, the government took action to revise the national curriculum and assessment arrangements.

The 2011 Education Act, along with the new national curriculum, new grading scale for students, more national tests, and reformed teacher education, provide a strengthened foundation for the decentralised process in Sweden.

The new formulation addresses previous concerns about vagueness in the definition of expectations but still deliberately leaves considerable scope for interpretation at school level. Its comprehensive structure of fundamental values, overall goals and subject syllabi provides a helpful but not too prescriptive framework which municipalities and schools can build upon. There has been broad acceptance of its legitimacy and usefulness in steering the work of schools throughout the country. The new curriculum's emphasis on values, skills and knowledge broadly reflects emerging international practice, as described in a study by the United Kingdom's National Foundation for Educational Research (NFER and Arad Research, 2013).

In addition, the new curriculum also helpfully outlines the responsibilities of teachers and principals in developing and delivering the curriculum in ways that: "…promote the development and learning of all students, and a lifelong desire to learn" (NAE, 2011b). The evidence available to the OECD Review suggests broad support for the greater detail in the new curriculum as a clearer statement of educational mission that will help to promote greater consistency.

However, determining how best to interpret expectations and to design a school curriculum requires considerable professional experience and expertise. One of the objectives of the decentralisation policy was to promote teaching approaches better adapted to the needs of young people locally, but the evidence shows that, in practice, such local diversity has not come about (NAE, 2009; SOU 2014:5). The implications for innovative and effective teaching and learning place significant demands on the professional skills of the educational workforce and, in the absence of capacity building through well-targeted professional development, there is the likelihood that particular approaches may be followed too narrowly.

The complex system does not promote collaboration among schools

As explained earlier, the policy of decentralisation was also accompanied by moves to make the school system more diverse and to allow greater choice of schools (see Chapter 2), including the new independent schools (1991) and the right to choose which school students will attend (1992). This has led to competition among schools to attract students that can be a disincentive for collaboration among schools, municipalities and private organisers.

The new independent schools are publicly funded but privately managed. There are a number of different ownership arrangements, including by groups of parents, private companies (including chains that operate across the country) and charitable organisations. Their funding comes from municipalities on a *per capita* basis through vouchers attached to each student, on the same basis as public schools. The size of the grant varies according to the policy of the municipality in relation to additional needs such as disadvantage and school type. Independent schools can function on a for-profit basis if the costs of their operation are less than the funding provided through municipal grants (see Chapter 2).

In many ways, the 1992 reform that gave parents and children the right to choose which school to attend was a complementary reform to the creation of independent schools. Parents were no longer required to enrol their children in the local school, but

could choose any school, public or independent, that met their wishes for their child's education and had places available. In that way, choice was extended to a more diverse range of schools and choices were not determined by the ability to pay.

Parents have a range of sources of information to support their choice of schools. Many will research the market carefully, visiting schools and seeking the views of parents who have children who attend (or have attended) a school which interests them. More objective evidence can be accessed through published reports of the Schools Inspectorate. Municipalities also provide information locally that can include performance data on schools and, in some cases, survey evidence relating to students' and parents' views about schools. The Swedish Association of Local Authorities and Regions (SALAR) publishes an influential table showing the comparative ranking of schools based on performance outcomes and attitude surveys.

The creation of a market in the school system has had broad political support. However, it also makes steering the system more complex, particularly in creating the conditions for collaborative school improvement. All schools must pursue the national goals, including the national curriculum. However, competition for students, supported by mechanisms, such as the SALAR tables (a comparison of 15 indicators on issues such as national test results, school costs and staffing [Nusche et al., 2011]), can be a disincentive to work collaboratively. There is increasing evidence internationally of the benefits of collegiality within and between schools but such collaboration is more difficult to achieve in a competitive environment. Creating the conditions for such collaboration within its competitive system is a further challenge for Sweden.

Different options to foster ownership of and responsibility for national priorities

Broadly similar approaches to decentralisation employed in other countries can provide insights on how to address the lack of ownership of national priorities and clarity and consistency of responsibilities. In Australia, for example, the federal system has succeeded in bringing states and territories together on a common educational policy agenda. A key element in establishing a stronger national consensus was the creation of the Ministerial Council on Education, Early Childhood Development and Youth Affairs (MCEECDYA) in 1993 as the principal forum for developing national priorities for schooling across the country. Functions of the Council include:

- Co-ordination of strategic policy at the national level.
- Negotiation and development of national agreements on shared objectives and interests (including principles for Australian Government/State relations) in the Council's areas of responsibility.
- Negotiations on scope and format of national reporting on areas of responsibility.
- Sharing of information and collaborative use of resources towards agreed objectives and priorities.
- Co-ordination of communication with related national structures and collaboration between them.

Australia has successfully introduced new national bodies, curriculum and assessment reform, improvements in teacher and leadership capacity and new accountability mechanisms. Although not directly parallel, MCEECDYA provides an example of a mechanism that helped to bring different levels of the Australian education system together behind an ambitious reform programme.

In the Netherlands, the government has recently moved to policy development built on agreements with stakeholders. The recently concluded National Agreement on Education (2013), for example, comprises agreed common goals on quality improvement that are worked out in specific sub-agreements (OECD, 2015).

A recent OECD Review of school education in Wales (OECD, 2014a) recommended the development of an improvement strategy and the Welsh Government subsequently published "Qualified for Life – An educational improvement plan for 3-19 year-olds in Wales" (Welsh Government, 2014). That plan sets a vision for Welsh education, defines what it sees as the improvement challenge, and sets out the actions it proposes to take to meet that challenge in the form of four strategic objectives.

In Canada, the province of Ontario adopted an education strategy in 2003 that built from a small number of ambitious goals, focusing initially on literacy and numeracy. It established a guiding coalition led by ministers but including key stakeholders. It deliberately set high standards but also recognised the implications for building capacity of leaders and teachers. Management information systems allowed close monitoring of progress over time, built on robust student-level data. The aim was to encourage wide ownership, within a constructive culture that encouraged exploration and learning rather than compliance and delivery.

The Ontario strategy is perhaps the world's leading example of professionally-driven system change. Through consistent application of centrally-driven pressure for higher results, combined with extensive capacity building, in a climate of relative trust and mutual respect, the Ontario system was able to achieve progress on key indicators, while maintaining labour peace and morale throughout the system (OECD, 2011).

The challenges associated with a policy of decentralisation relate to the clarity and perceived achievability of the national goals and the extent to which they are accepted, understood and interpreted faithfully at the local level. Decentralisation also requires each level to have the capacity to translate these expectations into practice and to use the freedom to act in ways that can meet those goals and not introduce additional competing priorities. Experience of decentralisation in practice in Sweden suggests that the policy continues to present major challenges for provision of consistently effective and high quality education.

Evaluation and accountability arrangements do not adequately support school improvement

Successive reports, both specific to Sweden and more generally, have recommended the need to set evaluation and assessment arrangements within a coherent overall strategic framework (Le Grand, Szulkin and Tahlin, 2005; Nusche et al., 2011; OECD, 2013b; SOU, 2014:12). The 2013 OECD report, *Synergies for Better Learning*, which is based on a study of evaluation and assessment in education conducted in 28 countries, made a general recommendation that countries should establish overarching evaluation and assessment frameworks that balance accountability, monitoring and improvement functions (OECD, 2013b). Synergies between external and internal evaluation should be promoted and the link to classroom practice strengthened. Overall, the report recommended that evaluation should focus less on compliance and more on contributing directly to improvement of teaching and learning, and ultimately student outcomes. The report recognises that the speed and extent of the achievement of this change in focus is partly dependent on the maturity of the existing evaluation culture.

In Sweden, the scope and significance of educational assessment and evaluation have increased considerably in recent years, as part of more general moves to improve monitoring and strengthen accountability mechanisms. Inspection systems have been re-established, and the role of measurement has increased, particularly in the form of national testing of student performance. School self-evaluation has also become more important, as part of a general move to link evaluation directly to school improvement (Nusche et al., 2011).

Sound evaluation and assessment arrangements also help to promote an understanding of the essential features of high quality education and build commitment to quality as a consistent feature of the system. Such arrangements are central to efficacy of the outcomes-based approach. Prior to 1990, trust was a strong feature of the Swedish education system, but it has dropped significantly in recent years as decentralisation and marketisation increased diversity in the school system (Figure 1.9).

There is also an increased need for objective evidence of how schools are performing, individually and collectively. Management by objectives requires such high-quality data and evidence about quality if government, municipalities, school leaders and the wider public are to know to what extent policy intentions are being realised. Credible and timely evidence about how well the system is working in practice – and of how it might improve – is essential for the decentralisation policy to realise its potential strength of combining consistency of mission with sensitivity to local needs and circumstances.

The earlier mentioned 2011 OECD report, *Reviews of Evaluation and Assessment in Education: Sweden*, identified four broad components in Sweden's approach to evaluation and assessment (Nusche et al., 2011):

- Publicly available standardised data on student performance and other key areas based on statistics and national tests aggregated at school and municipal level (making possible comparison between schools and municipalities in several key areas).
- National and municipal school inspection (producing publicly available reports and also direct oral feedback).
- Regular systematic and also occasional school and municipal questionnaire-based surveys on client opinion and satisfaction (targeting mainly parents and students).
- Qualitative self-evaluation by municipalities and schools and quality management processes (documented particularly in yearly quality reports by municipalities and schools).

Under the current outcome-based steering of the education system, the central government and municipalities, as well as individual schools, are required to follow up and evaluate educational activities in relation to goals and conditions that apply to them (Le Grand, Szulkin and Tahlin, 2005). Effectiveness of this management-by-objectives approach depends on all levels of the school system generating and using robust and reliable data and information to monitor progress. This is an area for improvement for Sweden.

Student assessments not sufficiently reliable

The evaluation and assessment system in Sweden aims to determine progress of each student towards the national standards. It is performance-based, using open-ended tasks to reflect the range of different learning goals. Student assessments take the form of

teachers' judgements and awarding of grades. The design of the current grading system is potentially helpful, and the national rubrics provide a useful basis for promoting validity and reliability.

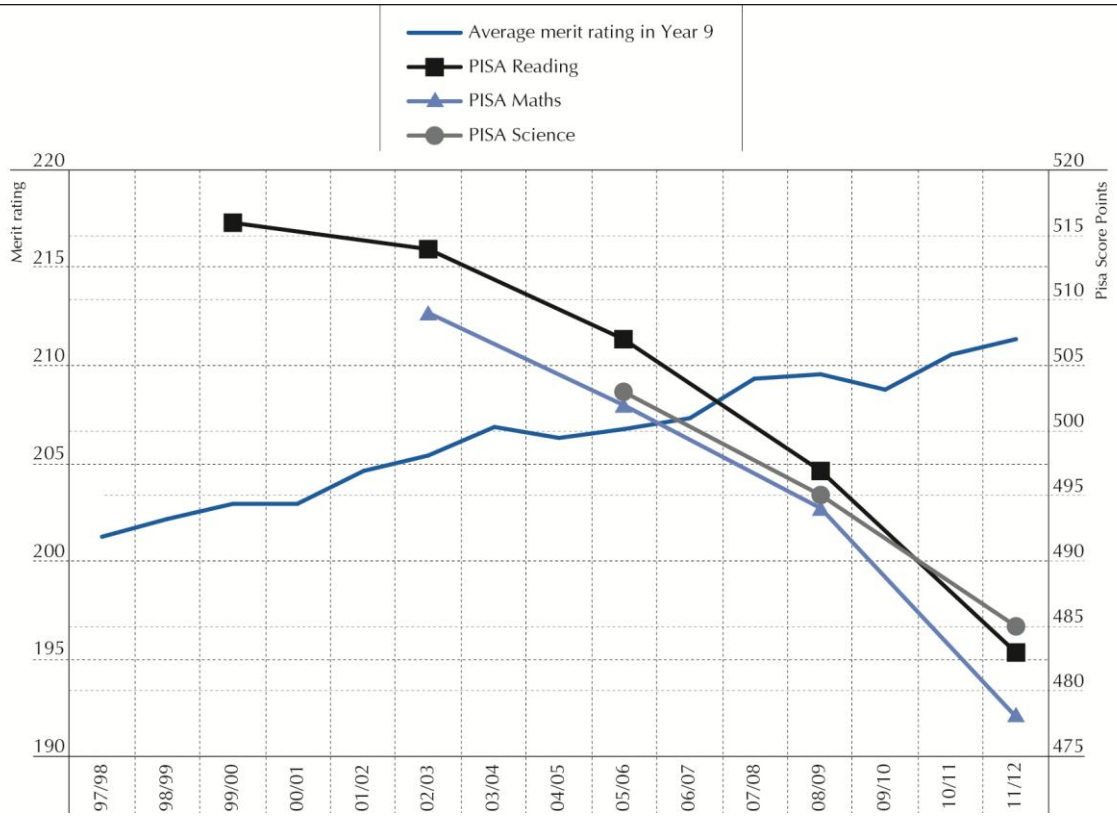
Currently, compulsory national tests are administered by schools at Years 3, 6 and 9 and in upper secondary education. Assessments in Years 3 and 6 cover Swedish/Swedish as a second language, mathematics and English (in Year 6 only) and are intended to be used for diagnostic purposes. The national tests in Year 9 and those in upper secondary school also cover Swedish/Swedish as second language, mathematics and English plus one science subject (biology, physics or chemistry) in Year 9 (determined by the NAE). Tests in Year 9 and in upper secondary school are used for summative reporting. Teachers can also draw down tests in other subjects from a central resource bank. Students can retake tests that they do not pass first time. The general philosophy is that tests should be used to supplement teachers' judgements, and the relative weighting given to test results and teacher judgements is determined by the school.

A major challenge requiring action is to ensure that the system of student assessment is sufficiently rigorous and can provide reliable evidence to monitor progress in students' learning, diagnose the nature of areas of learning difficulty, provide insights into the effectiveness of teaching and allow consistent monitoring of the extent to which national goals are being achieved. Various studies, including the 2011 OECD review on evaluation and assessment, have questioned the reliability and usability of student assessment data in Sweden (Caldwell, Thorton and Gruys, 2003; Nusche et al., 2011).

There is a divergence between national student performance data and trends in student performance shown by PISA over the same period (Figure 4.2), also confirmed by other international tests such as TIMMS and PIRLS. The lack of robust and reliable student assessment data undermines formative and summative use in classrooms, preventing both teachers and students from using this information to support the learning process, and also hampers system-level monitoring.

The Swedish system relies on test results and grades awarded by the students' teachers, although selected research evidence points to inequities in teacher grading. In Sweden's goal-oriented education system, strong teacher skills in both formative and summative assessment are essential to monitor progress towards learning goals. Adequate training is particularly important to ensure reliability of teachers' scoring of national tests (Nusche et al., 2011). Evidence suggests that if such training is not prioritised, the variable assessment capacity of Swedish teachers may continue to challenge the reliability of grades and the results of national assessments.

Figure 4.2. Comparison of average merit rating in Year 9 and PISA assessment data, 1997/98 - 2011/12



Sources: NAE (2014), *Facts and figures 2012: Pre-school activities, schools and adult education in Sweden, summary of report 2013*, NAE, www.skolverket.se/om-skolverket/publikationer/visa-enskild-publikation?_xurl_=http%3A%2F%2Fwww5.skolverket.se%2Fwtpub%2Fws%2Fskolbok%2Fwpubext%2Ftrycksak%2FBlob%2Fpdf3184.pdf%3Fk%3D3184; OECD (2014), PISA 2012 Results: *What Students Know and Can Do (Volume I, Revised edition, February 2014): Student Performance in Mathematics, Reading and Science*, PISA, OECD Publishing, Paris, http://dx.doi.org/10.1787/9789264208780-en; OECD (2010b), *PISA 2009 Results: What Students Know and Can Do (Volume I): Student Performance in Reading, Mathematics and Science*, PISA, OECD Publishing, Paris, http://dx.doi.org/10.1787/9789264091450-en; OECD (2007), *PISA 2006: Science Competencies for Tomorrow's World: Volume 1: Analysis*, PISA, OECD Publishing, Paris, http://dx.doi.org/10.1787/9789264040014-en.

The approach to assessment, based since 2011 on individual teachers' judgements and grading of students, is on a scale of A to F, with nationally determined grade criteria (Table 4.2.). However, the nature and extent of training to help teachers understand and interpret the grade criteria and moderate assessment judgments seems inadequate. There is a general lack of confidence on the extent to which assessment judgements are consistent within and between schools and municipalities. Tests are set centrally, but marked in schools. Marking answers in response to open-ended questions can be complex, and it is difficult to achieve reliability.

In addition, where schools are in competition for students and their survival or profitability depends on evidence of success, there is a greater risk of mark and grade inflation. Evidence confirms that teachers' marking of the tests has been uneven, giving rise to concerns about reliability of results, including on the part of the Swedish Schools Inspectorate. Differences in interpretation of assessment criteria, issues of teachers' assessment skills and pressures associated with the high-stakes nature of the results for schools have been identified as partial explanations for a mismatch between higher levels reported internally and evidence of declining performance on international surveys. There

are, however, encouraging if relatively rare examples of development of shared understanding across teachers and of sound moderation practices. To build confidence in teacher assessments and tests, it is essential that such good practice becomes the norm.

Table 4.2. Knowledge requirements for English at the end of Year 6

Grade E	Grade D	Grade C	Grade B	Grade A
Students can understand the most essential content in clearly spoken, simple English at a relaxed pace in simple texts about daily and familiar topics. Students show their understanding by reporting content in a simple form with comments on content and also with acceptable results act on the basis of the message and instructions in the content. To facilitate their understanding of the content of the spoken language and texts, students can choose and apply a strategy for listening and reading. Students can choose texts and spoken language of a simple nature and from different media and with some relevance use the selected material in their own production and interaction. Students comment in simple forms on some phenomena in different contexts and areas where English is used, and can also make simple comparisons with their own experiences and knowledge.	Grade D means that the knowledge requirements for Grade E and most of C are satisfied.	Students can understand the main content and clear details in simple English, clearly spoken at a relaxed pace, and also in simple texts on daily and familiar topics. Students show their understanding by reporting content in a simple form with comments on content and details and also with satisfactory results act on the basis of the message and instructions in the content. To facilitate their understanding of the content of the spoken language and the texts, students can to some extent choose and apply strategies for listening and reading. Students can choose from texts and spoken language of a simple nature and from different media and in a relevant way use the selected material in their own production and interaction. Students comment in simple forms on some phenomena in different contexts and areas where English is used, and can also make simple comparisons with their own experiences and knowledge.	Grade B means that the knowledge requirements for grade C and most of A are satisfied.	Students can understand the whole and important details in clearly spoken, simple English at a relaxed pace in simple texts on daily and familiar topics. Students show their understanding by presenting an overview with their comments on content and details and also with good results act on the basis of the message and instructions in the content. To facilitate their understanding of the content of the spoken language and the texts, students can to some extent choose and apply strategies for listening and reading. Students can choose from texts and spoken language of a simple nature and from different media and in a relevant and effective way use the material chosen in their own production and interaction. Students comment in overall terms on some phenomena in different contexts and areas where English is used, and can also make simple comparisons with their own experiences and knowledge.

Source: NAE (2011), *Curriculum for the compulsory school system, preschool class and the leisure-time centre 2011*, NAE, Stockholm.

According to School Ordinance 2011:185, the national tests in compulsory school are to support teachers' assessment of student performance and grading. However, they are increasingly used for a much wider set of purposes, including formative and summative assessment and reporting and school and system evaluation. These different uses of test data can be in conflict, and it is important that such conflict be reduced by being very clear about the intended uses of assessment and probable unintended consequences of multiple uses.

Above all, as recommended in the OECD evaluation and assessment report for Sweden (Nusche et al., 2011), reliability of data needs to be improved by, for example, introducing external marking. However, the risks of continuing narrowing effects on the curriculum would remain. Alternative approaches to national monitoring, such as cohort sampling, could be considered.

Furthermore, in Sweden's goal-oriented education system, strong teacher skills in both formative and summative assessment are essential to monitor progress towards learning goals. Further professional development in use of formative and summative assessments is a key component of ensuring reliable scoring by teachers of classroom-based and national tests.

Underdeveloped appraisals of teachers and school leaders

There is no formalised national system of individual teacher appraisal in Sweden. Municipalities are expected to develop their own appraisal arrangements, and practice varies across municipalities. There is little evidence of systematic professional feedback based on qualitative evaluations of performance, although student test scores are commonly used as points of reference. Swedish teachers report a significantly lower frequency of direct observation of their work (51%) than the TALIS average (79%). Half of Swedish teachers believe that the feedback they receive has no impact on their classroom practice (OECD, 2014d).

With no agreed criteria or standards for the characteristics of good or accomplished teaching, the nature of decisions about teacher effectiveness will inevitably vary, leaving the main determinant of decisions about pay related more to pragmatic considerations (such as recruitment, retention, commitment and effort) than to quality of work. Approaches to establishing criteria for teacher registration based on clear professional standards have, as of yet, failed to gain necessary traction.

Evaluation of the quality of the work of school principals is also not based on systematic procedures and agreed standards. A growing body of evidence, including from our review, points to the need to improve pedagogical leadership among school leaders.

A significant investment in human resources will be needed to help Swedish school leaders develop the desired pedagogical leadership (see Chapter 3). This effort would benefit greatly from the introduction of a more formal and consistent system of appraisal of school principals with more direct focus on improving pedagogical leadership. There are currently no agreed standards relating to the characteristics of high-quality school leadership. A clear consensus on what high quality leadership should look like would enhance external school evaluations by municipalities or the national inspectorate, which already have a direct bearing on the work of the principal. For this, Sweden may look to the example of Scotland (Box 4.1.).

Box 4.1. Scotland: System-wide reform of the teaching profession.

Following a major review entitled "Teaching Scotland's Future", Scotland has embarked on a systemic reform of the teaching profession. Partnership mechanisms involving national and local government and all stakeholder agencies were established to promote career-long professional growth of educators. As part of a newly introduced scheme of "professional update", operated under the auspices of the General Teaching Council Scotland, it is expected that all teachers will participate in an annual process of professional review and development that will include at least one formal meeting. The process, designed to be supportive but challenging, encompasses elements of performance management, but is primarily aimed at professional growth.

This revised professional review system isn't the only reform underway in Scottish schools. A culture of professional enquiry and personal responsibility for career-long professional learning is being promoted throughout Scotland. Teacher training at all levels is being reviewed, including qualifications for entry into the profession, which involve new, collaborative partnerships between universities and schools to help reform undergraduate degrees, and reviews and enhancement of professional standards. There is a new focus on masters-level learning for teachers, and leadership development is also being enhanced throughout the country.

Accountability mechanisms have also been reformed to strengthen the role of self-evaluation, already well-established in Scotland. School inspections now have a greater focus on the nature, quality and impact of professional development in each school. All of this is designed to support a major reform of the country's curriculum and the goal of higher student achievement.

Source: OECD (2013c), *Teachers for the 21st Century: Using Evaluation to Improve Teaching*, OECD Publishing, Paris, http://dx.doi.org/10.1787/9789264193864-en.

Scope to strengthen effectiveness of school inspections

School inspection has been a feature of Swedish education since 1858, but was discontinued in 1991 as part of the general reform programme at that time. It was brought back on a limited basis in 1998 and then formally reintroduced in 2003, when the National Agency for Education was charged with undertaking a programme of full inspections. In 2008, a separate Swedish Schools Inspectorate was established with the aim of further emphasising the importance of inspection and establishing clear separation between evaluation and development. The Swedish Schools Inspectorate works within a framework of guidelines and resources set by the Ministry for Education and Research but has operational independence in relation to how it discharges its functions. Municipalities can also carry out their own school inspections.

According to the Swedish Schools Inspectorate's website, its mission is to control whether municipalities and schools fulfil their responsibilities in relation to the regulations set out in the Education Act. It inspects schools, investigates complaints, approves the formation of new independent schools and inspects them on the same basis as municipal schools. The Inspectorate also undertakes thematic evaluations that focus on teaching and learning and lead to reports aimed at encouraging good practice.

The Schools Inspectorate also has to evaluate how well educational activities and schools are functioning in relation to the national objectives and national curriculum. Above all, the Inspectorate checks that municipalities and schools have systems for self-evaluation and strategies for self-improvement efforts. The Inspectorate's "overall objective is to help engender good education in a safe environment", and it has a responsibility to ensure that the quality of Swedish education is "good enough to contribute to the economic and social prosperity of the country" (Swedish School Inspectorate, 2009). It also has the duty to promote equity by evaluating the extent to

which entitlement under the law to high-quality schooling and childcare is being realised in practice. In addition, it has the task of reducing inequalities across municipalities and schools by focusing on variations that affect achievement.

Inspections in Sweden's schools are conducted within a framework of general standards covering results, processes and conditions. A typical inspection involves two inspectors for two days. Inspectors, who normally have an education background, evaluate both performance of schools and compliance with legal prescriptions. They must reconcile professional judgements in relation to quality with specific legal requirements. Reports are addressed to the organiser (the municipality or private provider) and the principal and follow a standard format encompassing results, activities and conditions. These reports, available online, indicate whether specified goals have been met and what action, if any, is needed. Problems are described and analysed, along with specific remedial actions to be undertaken by the school. Inspectors follow up these reports, either directly or through documentation, to check on the extent to which recommended actions have been taken. New powers have opened the possibility of fining schools that fail to take necessary action. In addition, accountability measures for schools were strengthened recently, obliging the Schools Inspectorate to use tougher sanctions regarding shortcomings relating to achievement of learning goals.

In principle, many features of the system of inspection in Sweden reflect developing practice internationally. The Standing International Conference of Inspectorates (SICI) produced a memorandum in 2013 that sought to identify the features of effective inspection. Among other factors, the memorandum stressed the importance of inspection maintaining a direct focus on learning and teaching, being proportionate, and encouraging self-evaluation (SICI, 2013). These all feature to some degree in the system that has developed in Sweden following reintroduction of inspection in 2003. The same can be said in relation to the policy directions for school evaluation set out in OECD's earlier mentioned international study of evaluation and assessment in education (Box 4.2.) (OECD, 2013b).

The first round of school inspections in Sweden ended in 2009 and was followed by a revised, more proportionate model of inspection. Gradually the differentiation was accentuated, and schools that were thought to be performing well, based on test data, previous inspection evidence and complaints received a basic inspection. Schools where there may be more cause for concern received a widened inspection. The inspection regime has become well established in the relatively short period since its inception. Since 2003, all Swedish schools have been inspected twice. Taken as a whole, inspection reports provide a good basis for identifying recurrent issues at both municipal and national level and can provide guidance on priorities for support or policy development. The transparency of inspection processes and the speed with which the new inspectorate was able to carry out a comprehensive inspection programme covering all schools in Sweden are impressive, and its reports can be influential.

However, evidence gathered during this review also suggests more mixed reactions to its current operations. A 2013 report from the Swedish National Audit Office (SNAO) concluded that: "...state supervision is currently not working in a sufficiently active manner to provide good conditions for all students to receive the same high quality of education." It highlighted concerns about consistency across inspections, too strong a focus on documentation, and insufficiently robust follow-up to ensure necessary improvements are being made (SNAO, 2013).

Box 4.2. Policy directions for school evaluation

Governance:

- Frame school evaluation in relation to student learning objectives.
- Ensure that school evaluations aim to improve teaching, learning and student outcomes.
- Raise the profile of school self-evaluation.
- Consider moving to a differentiated approach to external school evaluation.
- Align external school evaluation with school self-evaluation.

Procedures:

- Develop nationally agreed criteria for school quality to guide school evaluation.
- Promote an evidence-based school-evaluation culture.
- Promote the availability and use of appropriate self-evaluation resources.
- Ensure transparency in external school evaluation procedures.
- Promote peer learning among schools.

Capacity:

- Ensure the credibility of external evaluators and enhance their objectivity and coherence.
- Strengthen school leaders' capacity to establish an effective self-evaluation culture within the school.
- Engage all school staff and students in school self-evaluation.

Reporting and use of results:

- Optimise the feedback of nationally collected data to schools for self-evaluation and improvement.
- Promote the wider use of the results of external school evaluations.
- Ensure a systematic follow-up to external school evaluations.
- Report contextual information with school-performance measures.

Source: OECD (2013b), *Synergies for Better Learning: An International Perspective on Evaluation and Assessment*, OECD Reviews of Evaluation and Assessment in Education, OECD Publishing, Paris, http://dx.doi.org/10.1787/9789264190658-en.

In addition, while school inspection enjoys considerable respect in Sweden, current reporting focuses, not on a school's strengths, but on areas where a school has departed from legal requirements. In that sense and from the perspective of a school, the best report is one that says nothing. While there appears to be a recognition that areas identified by inspection for attention are generally valid, only a fifth of the principals who responded to the Swedish National Audit Office survey believed that the quality of teaching would be improved by addressing the deficiencies pointed out by the Schools Inspectorate. The impression is one of a missed opportunity to use the inspection programme more constructively.

The aim should be to establish an evaluation culture within which inspection contributes more directly to improvement in the quality of learning and teaching and in outcomes for students. As far as possible, inspection should be seen as a constructive process that is conducted with schools rather than imposed upon them. The impact of inspection reports on school improvement would be increased if they contained positive statements about performance and highlighted good practice. Reports should be used more powerfully to help to reinforce schools that are currently performing well and to

provide evidence of good practice that can serve as reference points for school improvement. In that way, the role of inspection would be enhanced, and more of the constructive engagement during an inspection would be captured for wider dissemination.

As noted earlier, the Swedish National Audit Office also identified follow-up to inspection as an area for improvement (SNAO, 2013). It is concerned that action following an inspection is insufficiently thorough, and it sees the need for a more robust approach focusing more directly on evidence of improvements in teaching and learning, as opposed to improvements in documentation and management processes.

Partially in response to these findings, the model for regular inspections was revised in 2014. The revised model adopts a more proportionate, risk-based approach to focus the Schools Inspectorate's efforts on schools that are considered most in need of inspection, and to provide more follow-up and advice and guidance. Also in 2014, the Schools Inspectorate introduced a model for structured lesson observations in the regular supervision.

Although the NAE does not have a general remit for supporting individual schools, it can do so on a limited basis, including action as a result of inspection. There are encouraging developments, already being trialled, towards establishing a greater facility for follow-up after inspections and capacity building involving NAE and the Schools Inspectorate. Such approaches should be further explored, carefully evaluated and, where appropriate, extended. Sweden may look to the example of the Netherlands, where a targeted approach by the Education Inspectorate with additional subsidies has been successful in providing weak and very weak schools with the advice and assistance they needed for their school improvement efforts (Box 4.3.).

Box 4.3. Targeted support to educators in weak schools in the Netherlands

The Netherlands is one of the most decentralised school systems among OECD countries. It is also considered to be among the best performing OECD countries. As in many countries, however, some schools face capacity challenges, and students were not benefitting equally from a quality education.

In response to this, the government has put in place an innovative system aiming to support weak and very weak schools to improve as quickly as possible. The Education Inspectorate plays a key role in identifying weak schools based on a number of (output) indicators. Schools that are identified as weak or very weak receive more intense follow-up inspection. Schools that are labelled very weak must improve or be closed down within two years. During these two years, the Inspectorate engages with school boards and monitors the implementation of its recommendations. The role of the Inspectorate during this time is one of supervision, not only advice.

Alongside this top-down intervention, which is unique to the highly decentralised education system, weak schools are provided with specialised advice and assistance, mostly subsidised by the Ministry and carried out by a range of organisations in the field. This system yielded promising results: from 2006 to 2010, the number of very weak schools has been reduced more quickly than the objectives originally set out (van Twist et al., 2013).

Source: van Twist, M. et al. (2013), "Coping with Very Weak Primary Schools: Towards Smart Interventions in Dutch Education Policy", *OECD Education Working Papers*, No. 98, OECD Publishing, Paris, http://dx.doi.org/10.1787/5k3txnpnhld7-en.

Developing a culture of collaborative learning and improvement

Research evidence shows that one of the most effective options for developing professional capital, and especially social capital, among teachers and leaders is through

school-to-school collaboration and assistance. School-to-school collaboration provides the means of circulating knowledge and strategies around the system; it offers an alternative to top-down intervention to support struggling schools; and it develops collective responsibility among all schools for all students' success (OECD, 2014a).

A strong individualistic culture remains in the Swedish school system. Municipalities, schools, principals and teachers are used to working in relative isolation. But international evidence increasingly points to the importance of establishing powerful collaborative improvement cultures such as those developed in Austria around the New Secondary Schools Reform (Box 4.4.), in England around the City Challenge programme, in Wales through Challenge Wales, and in Scotland through its school improvement partnerships. According to an independent evaluation of City Challenge for the English Department for Education (Hutching et al., 2012), key factors in improvement included the opportunity to work directly with other schools (in particular, schools with similar intake) and the designation of a lead head teacher who could drive the agenda.

While there are very encouraging but isolated examples of peer evaluation and support in Sweden, a consistent message to this review was the absence of effective improvement support for schools following an inspection or other evaluation activity. The Schools Inspectorate has unparalleled insight into where interesting and effective practice can be found and is well placed to act as a guide, or even a broker, in securing mutual support. Intelligence from inspection about good practice and strengths in the local area and beyond should be used to encourage collaborative partnerships and networking as a means of promoting improvement.

Box 4.4. Collaborative learning and improvement among schools in Austria

The Austrian New Secondary School reform started as a relatively small-scale project in 2008 with 67 pilot schools. It has since been a mandated school reform, which will be completed in phases by 2018. Central to the reform is the creation of a new leadership position at the school level, the *Lerndesigner*, a teacher-leader who together with the school's principal and other teacher-leaders (subject co-ordinators, school development teams, etc.) serve as change agents in their schools, driven by the principle of school-specific reform and focused on the national reform goals of equity and excellence.

The reform strategy is operating at the micro (school), meso and macro (system) levels. It is working on innovating learning through the *Lerndesigners*, creating conditions for them to learn and work together, and is aimed at helping to drive the system-wide reform. The strategy lies in qualifying teachers to become teacher-leaders, thereby enabling them and their schools to realise effective shared leadership.

Much effort is therefore placed on building social and leadership capital through networking events, which play a central role in the reform, as they provide the venue for learning, peer learning and dissemination of good practice. A specially designed two-year national accredited qualification programme for *Lerndesigners* and an online platform for sharing ideas and practices form an integrated part of the reform's continuous professional development and leadership development efforts. The rationale for creating and qualifying and networking change agents was clear, and focused: transformation at all levels occurs when change agents are networked and establish communities of practice.

Source: OECD (2013c), *Leadership for 21st Century Learning*, Educational Research and Innovation, OECD Publishing, Paris, http://dx.doi.org/10.1787/9789264205406-en.

As mentioned earlier, the Schools Inspectorate has been moving to a more proportionate, risk-based approach to inspection. From 2014 onwards, the scope and extent of inspection are determined by an initial assessment of the school, based on

available data and analysis of relevant documentation. Where there are concerns about a school, a more intensive inspection is carried out with the aim of achieving quick and significant improvement. While there is a need for inspection to be proportionate and avoid the opportunity costs associated with preparation and engagement in inspection, there are potential drawbacks associated with risk-based approaches. In Sweden, given the limited reliability of student assessment data highlighted earlier, there is a danger that the sample selected for inspection may not be soundly based. Schools selected for a wider inspection may be wrongly identified as underperforming, while other schools that would benefit from inspection may be omitted from the sample.

In addition, evidence from a study of the risk-based approach adopted by the Education Inspectorate in the Netherlands suggests that there is merit in maintaining a degree of evaluative involvement with schools more generally (van Twist et al., 2013). That study advocates a more cyclical approach to avoid the risk that performance of relatively weak or average schools outside the risk-based sample can deteriorate and would benefit from continuing engagement with external evaluation. Sweden should reconsider its new inspection approach for 2015-20 along these lines. The Schools Inspectorate should not limit its efforts only to identifying and supporting struggling schools, but instead should also play an important role in identifying and celebrating good practices within the Swedish school system.

Establishing stronger oversight and support

Over the last few decades, increasing complexity of school systems has led to a greater degree of freedom in decision-making for local authorities, school governing boards and schools in several OECD countries (Hooge, Burns and Wilkoszewski, 2012; Walander, Pater and van der Weide, 2010). Sweden is among the countries that have devolved considerable powers to the local level, mostly to municipalities, who are responsible for management of their local education systems and their public schools. School organisers (both municipalities and private organisers) are key players in school affairs, including school evaluation. They have an important role in creating an administrative environment that encourages quality improvement through feedback, capacity development and incentives (Nusche et al., 2011).

The quality of the work of school organisers is, therefore, central to successful functioning of Sweden's decentralised school system. While the Schools Inspectorate already reports on education in municipalities, these reports appear to have only limited impact, and evidence about how well school organisers are fulfilling their mission points to wide variations in both capacity and quality. The 2011 OECD report on evaluation and assessment in education in Sweden highlighted a number of concerns of this nature including remoteness of local officials in many municipalities from school practice, an undue focus on budget issues rather than school quality, neglect of provision for children with special educational needs, and limited attention to quality improvement.

There is also evidence that approaches to ensuring quality at the local level vary considerably (Nusche et al., 2011; NAE, 2011a). While the role of the Schools Inspectorate in identifying issues to address seems to be clear and largely accepted, the extent to which local systems of evaluation and accountability are effective is problematic. The nature of Sweden's decentralised system, with 290 municipalities and many more organisers of independent schools, has given rise to issues about the relative capacity of different bodies to support improvement. Each municipality is free to appoint officials to oversee the school system, but there is no guarantee that those appointed will

have experience in educational quality improvement. In smaller municipalities, such officials may have many other responsibilities and roles in addition to monitoring the school system. Some schools may keenly miss school quality leadership at this level (Nusche et al., 2011).

Some of the larger municipalities, such as Stockholm or Malmö, do have such capacity and have developed their own systems of external and internal evaluation. However, there is insufficient focus on building a system of continuous improvement across all municipalities. The current role of evaluation in the steering system has a tendency to induce passive compliance and provides insufficient guarantees of consistent high-quality learning and teaching in schools across Sweden. Where practice is strong, it appears to be more a function of a particular mix of skills and personalities than of a coherent and systematic set of expectations irrespective of context.

In strengthening its oversight of the performance of its municipalities, Sweden can draw on examples of current approaches in England and in Wales. In both countries, the national inspectorates undertake a systematic programme of inspection of local authorities. A significant number of areas of weak or poor performance have been identified (as well as many good practices), allowing procedures to be put in place to strengthen the performance of this critical level of the education system. As with schools, such evaluations would benefit from the development of agreed quality indicators about effective local management. Scotland has developed a set of such indicators on the same basis as its school evaluation framework. Its publication, *Quality Management in Education* (HM Inspectors Education Scotland, 2000), would provide a useful point of reference for a similar initiative in Sweden. In that way, municipalities can not only be made more accountable but can also be helped to improve.

Underdeveloped school self-evaluations

In its international review of evaluation and assessment in education, the OECD defines self-evaluation as: "…an evaluation or review conducted by members of the school to assess the effectiveness of structures and processes in place and the quality of student learning outcomes" (OECD, 2013b). The review found an almost universal international policy focus on stimulating school self-evaluation, reinforced by supra-national bodies such as the European Union. Research also shows that improving schools' capacity for systematic self-evaluation is a vital developmental strategy (Ehren et al., 2013).

However, self-evaluation can take many different forms. There are wide variations in what it might mean in practice and in the degree of accompanying prescription and support. Approaches in the United Kingdom, for example, are highly structured with formal expectations about both process and reporting. Scotland developed its Quality Initiative in Scottish Schools in the early 1990s, and its approach and framework of quality indicators, How Good Is Our School, has received considerable international attention. The framework seeks to establish a common language of quality, allowing both internal and external evaluations to relate to agreed quantitative and, importantly, qualitative evidence. There have been successive iterations of the framework since its inception and the focus has become more aspirational, moving from How Good Are We Now? to How Good Can We Be?

In other countries, such as Australia and Iceland, there are formal requirements about reporting but freedom in relation to approach. In a few countries, including Sweden,

where the law refers to the need for quality assurance work to be documented, no particular approach is required or recommended and reporting is not mandatory, where the law refers to the need for quality assurance work to be documented.

A wide range of self-evaluation approaches and tools are in use in Sweden. These include the Balanced Scorecard, Total Quality Management, an online questionnaire developed by the NAE to help identify strengths and weaknesses (*Bedmöning, Reflektion,Utveckling, Kvaltet,* BRUK), a tool designed to promote increasing organisational maturity, a set of indicators for the business development of a school, a tool for analysing the school climate developed by the University of Stockholm, and a tool developed by the Schools Inspectorate for school organisers and schools to check if schools meet the legal requirements and students' needs.

While the current range of approaches to self-evaluation gives schools freedom to select those that meet their needs, there would be benefit in moving to a more consistent framework of expectations. There is currently no agreed view of the characteristics of an effective school, thus complicating collaborative exchanges among schools and giving rise to potential discontinuities between self-evaluation and inspection at local and national levels.

Box 4.5. Centrally developed tools for self-evaluation in Scotland (United Kingdom)

Education Scotland, the external evaluation body in Scotland, has developed a central web-based resource which provides schools and school managers with a comprehensive set of tools which they can use to structure effective school-level evaluation. This resource, known as Journey to Excellence, has grown and developed over two decades and can be traced back to the publication of How Good is our School? in the late 1980s.

The complete Journey to Excellence package now includes the following parts:

Part 1: Aiming for Excellence explores the concept of excellence, what is meant by "learning" and "barriers to learning" and introduces ten dimensions of excellence.

Part 2: Exploring Excellence explores the ten dimensions in detail, giving practical examples from real schools which show the journey from "good" to "great".

Part 3: How Good is our School? and The Child at the Centre present sets of quality indicators for use in self-evaluation, of schools and preschool centres respectively, along with guidance on their use.

Part 4: Planning for Excellence provides a guide for improvement planning in schools and preschool centres.

Part 5: Exploring Excellence in Scottish Schools consists of an online digital resource for professional development. It contains multi-media clips exemplifying aspects of excellence across a wide range of educational sectors and partner agencies, as well as short videos from international education experts and researchers.

Plans are underway to enhance the resource further with new resources to support schools in the process of developing long-term strategic thinking and managing major change in a school context. The package is very widely used by schools, by all of Scotland's 32 local authorities and by most independent schools. The school quality indicators at the heart of the package are also used by external school evaluators for external review of schools. Built on the criteria developed for external school evaluation, they are regularly refreshed and updated on the basis of developing understanding of the characteristics of effective practice.

Source: Education Scotland Journey to Excellent website, www.journeytoexcellence.org.uk/.

There are a growing number of international examples of different ways in which the combination of internal and external evaluation can play a strong and constructive role in

school improvement (Ehren et al., 2013; OECD, 2013b). That relationship can take a variety of forms, but the trend is towards developing a more synergistic relationship. In New Zealand and Scotland, for example, the intention is that internal and external evaluation should be complementary, with self-evaluation forming the core of a holistic evaluation approach. Schools are provided with guidance on self-evaluation that is not prescriptive but stresses the need for rigour and respect for evidence in making evaluative judgements and the need to act on the evidence collected. In Poland, there has been a major shift, from a compliance-based inspection regime to one that combines internal and external evaluation in a new approach to school supervision. Poland is seeking to create a more constructive and open dialogue around evaluation and to build a much more collaborative culture (Mazurkiewicz, Walczak and Jewdokimow, 2014).

It would seem key for Sweden to develop a common understanding of the characteristics of a high-quality school. This common understanding would facilitate identifying, analysing and acting on quality issues, aid communication and collaboration, and support the development of an improvement culture. Internal and external school evaluations should be linked to a common set of quality criteria and should focus more directly on evaluating and promoting improvement in relation to those criteria. While current school evaluation arrangements are quite robust in determining areas of weakness, they are much less focused on identifying strengths. Much of the evidence about school performance is therefore negative and likely to inhibit development of a culture of ambition, confidence and calculated risk taking. Local variability in the capacity to respond positively, combined with confusion about priorities, have likely contributed to Sweden's declining performance on international measures of student performance, such as PISA, PIRLS and TIMMS.

Mechanisms of targeted support for municipalities and schools will be needed to help translate evaluation findings into tangible improvements in outcomes and in the quality of students' educational experience.

Base system-level evaluations on more reliable data and information

There is an international trend towards evidence-informed system-level monitoring and evaluation for improvement purposes. System-level evaluation provides the opportunity for education systems to monitor the extent to which progress is being made on system goals. Research evidence shows that system-level evaluation has a strong impact on policy and, indeed, one of its major purposes is to inform (the other is to provide accountability information on the system) (OECD, 2013b). These evaluations typically bring together data from international surveys, such as PISA, with qualitative and quantitative data from different levels within the system, particularly those related to student outcomes and school evaluations (Campbell and Levin, 2009; Hopkins et al., 2008).

In Sweden, in addition to reports from national audit bodies, the NAE has a key role in monitoring and reporting on the overall performance of Swedish schools in relation to national goals. It reports to the Swedish government on the extent to which national objectives are being met. The NAE also publishes analytical reports that include implications for action by different levels in the system. This system evaluation draws on results from international assessments, aggregated school assessments, thematic reports by the School Inspectorate and research undertaken by the NAE itself. The OECD review of evaluation and assessment in education in Sweden (found that results of system-level

evaluation are taken seriously and feed into policy development for school improvement (Nusche et al., 2011).

Education system evaluation relies heavily on teacher-based assessment of students. However, issues associated with the reliability of school data mean that confidence in this data set is low and the results of assessments are therefore not sufficiently robust to provide a sound basis for national assurance. The introduction of national testing does provide some basis for moderation, but only in selected subjects, and credibility of the results is heavily dependent on the integrity of local marking. There is an urgent need to address issues of reliability if evidence on student performance is to make an effective contribution to policy development.

In addition, the data and information collected by the Swedish Schools Inspectorate on the system's performance needs to be strengthened. The Schools Inspectorate should take a critical role in identifying strengths and areas of improvement – focusing inspections on both on schools and municipalities – and provide follow-up to those schools found in need of it.

Research plays an increasingly important role in supporting policy makers to make evidence-based decisions (OECD, 2007). This requires action and reflection through research, to follow and enrich policies while implementing the changes, in a cyclical process of trial-and-error learning. The realities of political and organisational life can, however, mean that governments pay less attention to implementation, monitoring and evaluation of policies than to development and announcement of new policies or programmes (OECD, 2014a). Analysis in a recently released OECD multi-country study on education reforms showed, for example, that only one in ten reforms and policies are evaluated (OECD, 2015). Our review had a similar impression of how reforms are implemented in Sweden, that they are not always sufficiently supported by monitoring and evaluation. One notable example, highlighted by several of our interviewees, was the 2011 reform of teacher education programmes, which was not based on a rigorous evaluation of existing programmes.

Development of education policy in Sweden over the last 25 years has been characterised by decentralisation, school choice and diversity, and new approaches to evaluation and accountability. Over broadly the same period, concerns have grown in Sweden about the performance of students and schools and the emergence of new equity issues. Sweden faces the challenge of moving to a more collaborative culture of ambition and improvement that would help build capacity at all levels of the system.

The Swedish school system must be steered more clearly towards improvement and must strengthen its evaluation and assessment arrangements, addressing reliability in student performance data and moving from a culture based on administrative compliance to one that uses accountability as a means to focus efforts on education priorities and sustained improvement.

Rather than continuing with a piecemeal approach to reform, Sweden should consider developing a comprehensive education strategy, one that pursues a limited number of ambitious priorities and can count on ownership by all those involved. It should aim for system-wide change, raising ambitions and expectations of all students, and building morale and professional capacity among teachers and school leaders. These are all essential components for the Swedish school system's reform agenda, to set it on a trajectory towards educational excellence.

Recommendation 3: Strengthen the steering of policy and accountability with a focus on improvement

Policy action 3.1: Together with key stakeholders, define a set of ambitious education priorities

Sweden should consider **defining a set of education priorities that are ambitious and forward looking**, pursued consistently at all levels in the system and supported by mechanisms for building ownership through early engagement.

A recent report on Dutch education stated that: "...complex education systems cannot be controlled but they can be steered" (van Twist et al., 2013). While there are clear strengths in the current system of steering in Sweden, significant developments are needed to make it fully effective. Ownership of the national agenda would be enhanced if a broader range of key stakeholders was more directly involved in setting national priorities. Although there was general support for the need for clear national priorities, actors outside the machinery of national government were very unclear about how such priorities were determined. Evidence shows a lack of understanding of the impact of national priorities and resource implications for local decision-making, pointing to the need for processes that secure such understanding and commitment.

An advisory Education Policy Council should be established to advise on setting of priorities. It should include the main stakeholders at the national, local and school levels, including parents and key external interests. Such a council (or similar mechanism) should draw on evidence from national and local agencies and from research. It should seek to establish an agreed approach to management of change, with greater attention to issues of pace and capacity. As it becomes established, it should also encourage greater ownership of the steering mechanisms and mitigate the risk of too many competing priorities appearing over time and at different levels of decision-making.

The existence of such a council would allow agreement to be reached on key national objectives and increase the likelihood that those objectives would be pursued throughout the system. Experience in Ontario (Canada) suggests that the number of objectives should be limited and focus on key outcomes relating to driving improvement in system performance. Considering the data on student performance on various international and national assessments, as well the various reforms and specific policies (grants and programmes) that MoER has implemented in recent years as areas of need, these objectives could focus on those suggested in Chapter 2 to improve quality and equity throughout the system.

Policy action 3.2: Develop a comprehensive national school-improvement strategy

Sweden should develop and implement **a comprehensive national school-improvement strategy to bring about system-wide change** that encourages the pursuit of agreed objectives, boosts expectations and student ambitions, establishes clear roles and accountabilities, and builds teacher and school-leader quality. Evaluation should be constructive, integral to improvement, and promote greater collaboration and networking. The robustness and reliability of evaluation and assessment evidence on student performance should be strengthened.

Experience of different approaches to school improvement suggests that **an effective strategy should have a governance structure** that can maintain strategic oversight of

implementation, is inclusive, has reliable evaluation and feedback mechanisms and allows clear and timely decision-making. The strategy should relate directly to agreed national priorities and objectives, and should establish connections and synergies to underpin effective implementation through to schools and classrooms. It should be based on clear agreement on the characteristics of a good school, good teaching and effective leadership.

Two-way communication along the decision-making chain will be needed to secure active involvement of the teaching profession and other key stakeholders. Clarity about necessary dependencies will be essential, particularly on developing capacity, including appropriate initial teacher education and continuing professional development. Accountability mechanisms should be constructive and intelligent, placing responsibility for improvement with those who take the key decisions and should avoid narrow compliance that can encourages gaming and stifle local creativity and innovation. From the outset, the strategy should include evaluation mechanisms that can inform development, report on outcomes and help drive improvement.

A central issue for improvement and a key component of the strategy lies in **the need to build capacity of teachers and school leaders,** based on the work developed by the proposed National Institute for Teacher and School leadership. The development of clear criteria (i.e. standards for good teaching and effective leadership) would provide the kind of common understanding of quality that is a vital component of a consistent and coherent improvement strategy (see Policy actions, Chapter 3).

The strategy should be very clear about the ways in which capacity will be built, by targeting support to schools and encouraging partnerships between municipalities and private organisers, as well as among schools, to allow for mutual support and development. A much more collaborative culture would encourage in-school, between-school and beyond-school partnerships around the priorities. Such collaborations should also be developed among municipalities as a way to share resources and promote good practice. Competition among schools for students means that incentives will be required to encourage such collaboration. The strategy should combine and build on different efforts currently available to support schools, especially from the NAE, SALAR, and representatives of private organisers, with input from the Schools Inspectorate. Implementation of the school improvement strategy and efforts towards achieving key priorities should be monitored within **a comprehensive assessment and evaluation framework** that clearly shows lines of accountability and related dependencies.

A bottleneck for effective functioning of the assessment and evaluation framework is the unreliable student assessment data that make monitoring progress challenging at various levels of the system (at the student/classroom level, at the school level and at the system level). **Urgent action is needed to strengthen the reliability of student assessment data** through, for example, moderation, sample external marking of tests and investing in the assessment capacity of teachers.

Assessment and evaluation should highlight strengths and areas for improvement at all levels of the system**.** That will lead to greater opportunities to encourage exchange of knowledge and positive collaboration and to identify and disseminate good practice, which can be used to build capacity. A key thread running through the proposed approach to school improvement evaluation and accountability is the need to move from an approach based primarily on compliance to one that uses accountability to focus improvement efforts on education priorities. The tests of improvement lie in raising the quality of the educational experience of young people in

Sweden and raising performance standards. Evaluation and improvement should not be seen as separate entities, but as integrated components in an overall assessment and evaluation strategy. Therefore, together with the earlier recommendations of the 2011 OECD report on evaluation and assessment in Sweden, the proposals in this review should be consolidated and incorporated into a comprehensive assessment and evaluation framework.

Policy action 3.3: Strengthen school self-evaluation and planning through an agreed set of indicators

Self-evaluation has become widely recognised internationally as integral to effective and sustained school improvement. There is positive evidence of considerable and long-standing self-evaluation activity at different levels in the Swedish education system, and a wide variety of tools has been developed over the years to support this work. However, the nature and extent of such activity is very dependent on local or individual initiative, and its impact on the quality of learning and teaching is unclear. Helpfully, the new school leadership programmes include training on evaluation as a significant element. As approaches to evaluation and accountability continue to develop in Sweden, close attention should be given to further strengthening the culture of and capacity for self-evaluation.

The requirement for **self-evaluation reporting by schools should be reinstated, in an appropriate form.** Until recently, each school was required to produce publicly available quality reports on an annual basis. The decision to abolish this obligation may reduce workload, but it sends a negative message about the importance the national government accords to self-evaluation. Particularly in a context of school choice, it is important that parents and students have access to a wide range of relevant information to help inform their decisions. Credible self-evaluation reporting can make an important contribution to such information. Expectations about the need to share self-evaluation findings with the main stakeholders, particularly parents, should be reaffirmed.

Swedish schools, school organisers and the Schools Inspectorate should work together to develop **a common framework of quality indicators as a guide for school improvement efforts**, to be used for internal and external evaluations. Quality management remains a duty for Swedish schools and municipalities. Its effectiveness and usefulness would be improved if this work was governed by an agreed common framework of quality indicators, specifically designed to be used for both external and internal evaluation. Such a framework should relate directly to criteria for effective teaching and leadership, and would provide a more consistent point of reference for both external and internal evaluations. Building on the existing inspection template and drawing on the best of other tools, the new framework should be developed collaboratively with a clear focus on use for self-evaluation and improvement.

It is also important to counter the current perception of compliance-based evaluation, which to some extent inhibits innovation. Indicators of quality should include support for a measured approach to innovation in municipalities and schools. The framework should then be used as a common language of quality, promoting a focus on what matters, stressing the need for robust evidence, identifying existing strengths and framing priorities for action.

Policy action 3.4: Strengthen the Schools Inspectorate to shift from a culture of administrative compliance to responsibility for improvement

Sweden should **strengthen and extend the role of the Schools Inspectorate** through:

- a more critical identification of strengths and areas of improvement, follow-up, promotion of networking and robust self-evaluations
- reporting on effectiveness of the efforts of municipalities and private organisers to improve quality of education in their schools.

It should use evaluation to help shift from a culture of compliance to one that strengthens accountability, focuses efforts on making improvement in line with education priorities, creates ownership through greater collaboration and networking, and supports identification of good practices.

Using an extended common framework of indicators, **inspections should report more critically on schools' strengths and areas of improvement**. The new approach should promote identification of good practices and disseminate them across the school system.

In addition, the Schools Inspectorate should assist schools directly through **more follow-up and targeted support**. Encouraging developments involving NAE and the Schools Inspectorate are already being trialled to establish greater facility for follow-up after inspections and capacity building. Such initiatives should be further explored, carefully evaluated and extended, where appropriate. For this, Sweden may look to the example of the Netherlands, which has realised good results through such a targeted approach in supporting schools' improvement efforts.

Recent moves to evaluate each school's capacity for self-evaluation should be strengthened further. Inspection should be based on a **robust self-evaluation against a new framework of quality indicators** (see Policy action 3.3). The school could then moderate and use that evidence, as well as evidence deriving from its own activities, to determine areas of strength and help frame its overall evaluations and recommendations.

While the immediate plan is for the Schools Inspectorate to focus inspection on the independent schools and on the 20% of municipality schools thought to be at greatest risk, there remains the need to use inspection to identify higher-performing schools and to challenge possible complacency in schools which fall outside the risk-based sample.

While inspection needs to be proportionate, that does not necessarily mean that a significant number of schools should miss the benefits that should flow from a critical but constructive external evaluation. Differences within schools are generally greater than those between schools, and using the nature of the school as the basis of proportionality therefore risks creating complacency about such internal differences. Consideration should be given to maintaining a light-touch engagement with all schools, not just those at greatest risk of failure. In this way, inspection can become a powerful driver for all schools to improve. Proportionate approaches to inspection also require sound evidence upon which to base the sample of schools to be inspected. Current concerns about the reliability of student assessment data represent a significant weakness in the data set available to determine which schools to inspect. As mentioned, urgent action is needed to strengthen the reliability of teachers' assessments of student performance.

Encouraging greater professional involvement in the inspection process can build capacity and improve the validity of inspections. **School leaders should be encouraged to play a direct role in inspections** by, for example, becoming peer evaluators**.** Participation of credible school leaders in inspections can have multiple benefits. It can broaden the expertise in an inspection team, enhance its credibility through the explicit involvement of current practitioners, and build capacity among the leaders themselves. School leaders or other education professionals can then use their experience to support their colleagues to better understand inspection and to share knowledge on good practices they have seen.

In addition, the **Schools Inspectorate should report on the effectiveness of municipalities and private organisers** in improving the quality of education in their schools. Currently, the Schools Inspectorate reports on the municipal level, but there is insufficient depth in the analysis of performance of municipalities, despite concerns about variability in the quality of their work guiding and supporting schools. There is also insufficient articulation between school self-evaluation, school inspection and municipal school evaluation. The national Inspectorate is well placed to use its evidence about school performance to report more directly on the effectiveness of the direction and support offered by school organisers to schools. Its periodic reports should be given greater authority and move to more direct evaluations of how a municipality or private organiser is discharging its functions, based on an agreed and transparent set of indicators.

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Annex A: The authors

A specific OECD Review team was formed to undertake the analysis and the development of concrete policy recommendations. The team is composed of OECD analysts and high-level international experts.

External Experts

Richard Elmore is the Gregory R. Anrig Research Professor at Harvard University Graduate School of Education. Richard joined the faculty of the Harvard Graduate School of Education (HGSE) in 1990, having previously taught at the College of Education, Michigan State University, and the Graduate School of Public Affairs, University of Washington. He is a member of the National Academy of Education, and a past president of the Association for Public Policy and Management, the national organisation representing graduate programs in public policy and management. He has held positions in the federal government as a legislative liaison with the U.S. Congress on education policy issues. He is founding faculty director of the Doctor in Educational Leadership (Ed.L.D.) programme at HGSE. His current research and clinical work focuses on building capacity for instructional improvement in low-performing schools. He spends at least one day per week in schools, working with teachers and administrators on instructional improvement.

Graham Donaldson is a Professor in the College of Social Sciences at Glasgow University and was appointed by Her Majesty the Queen as a Companion of the Order of the Bath in 2010. Graham taught in secondary schools in Scotland before working for the national curriculum body in Scotland as a curriculum evaluator. He joined Her Majesty's Inspectorate of Education (HMIE) in 1983 and ultimately, as head of the organisation, guided it through major structural reforms. In addition to being the chief professional advisor to ministers on education policy, he led a number of major reform programmes and was instrumental in the development of the Scottish Government's curriculum reform programme, Curriculum for Excellence. Following his retirement from HMIE, he has established a high profile internationally, lecturing extensively, working as an international expert for the OECD, advising NGOs and governments, including a review of teacher education in Scotland and a review of the national curriculum and assessment arrangements in Wales.

OECD staff

Beatriz Pont is a Senior Analyst with the Directorate for Education and Skills. She currently leads the OECD Education Policy Outlook and the OECD-Sweden Education Policy Review. At the OECD since 1999, her work has focused mainly on education policy. She has managed and contributed to a range of education policy comparative reviews in different areas, such as school improvement, school leadership, equity, adult learning and adult skills, and led a number of country education policy reviews, including Mexico, Norway and Wales. Previously, Beatriz was a researcher on education and training policies at the Economic and Social Council of the Government of Spain and also worked for Andersen Consulting. She has a B.A. in political science from Pitzer College, Claremont, California, holds a M.Sc. in International Affairs from Columbia University, and was a research fellow at the Institute of Social Science at Tokyo University.

Marco Kools is an Analyst with the Directorate for Education and Skills. He currently is the project leader of the OECD-Latvia Education and Skills Accession Review and the Transforming Schools into Learning Organisations project, and works on the OECD-Sweden Education Policy Review. He previously worked on the OECD-Wales Education Policy Review, Improving Schools in Wales, and CERI's Innovative Learning Environments project and led the development of the Education Today 2013 publication. Prior to joining the OECD in 2012, Marco served as an Education Specialist with UNICEF in the Solomon Islands, in Laos and at the UNICEF Innocenti Research Centre in Italy. Before that, Marco worked in the field of education and training in the Netherlands, where he started his career in 1999 as a teacher at a lower secondary school. Marco holds several degrees including an M.B.A, a B.Sc. in Educational Sciences and a PG Dip in Policy Analysis and Evaluation, and he is currently pursuing a PhD in Public Administration.

Judith Peterka is a Consultant with the Directorate for Education and Skills where she is currently contributing to the OECD Education Policy Outlook and the OECD-Sweden Education Policy Review. Judith previously taught in a secondary school in East London as part of the Teach First Programme in the United Kingdom and completed a PGCE in Mathematics Education at the University College London Institute of Education. She also holds a Masters in Social Policy from the London School of Economics and a Bachelor in Economics from the University of Tübingen.

Annex B: Agenda – OECD visit, 13-22 October 2014

Monday 13 October

Time	*Meeting with:*
08.45–09.30	Steering group
09.30–11.00	Ministry of Education and Research (*Utbildningsdepartementet*)
11.00–11.45	Mr. Gustav Fridolin, Minister for Preschool and Compulsory Education and Head of Ministry, Ms. Aida Hadzialic, Minister for Upper Secondary Education and Adult Education and Training, Ms. Helene Öberg, State secretary to Mr. Fridolin
12.30–14.30	Swedish National Agency for Education (*Skolverket*)
14.30–15.45	Swedish Schools Inspectorate (*Skolinspektionen*)
16.00–17.00	National Agency for Special Needs Education and Schools (*Specialpedagogiska skolmyndigheten*)

Tuesday 14 October

Time	*Meeting with:*
09.00–10.00	The Swedish Teacher's Union (*Lärarförbundet*)
10.15-11.00	Swedish Association of School Principals and Directors of Education (*Skolledarförbundet*)
11.15–12.15	Confederation of Swedish Enterprise (*Svenskt näringsliv*)
13.00–14.30	Initial Teacher Education, Stockholm University (*Lärarutbildningen, Stockholms universitet*)
14.30-15.30	Parent association (*Föräldraalliansen*)
15.45-16.45	Student associations (SVEA, *Sveriges Elevkårer*)

Wednesday 15 October

Time	*Meeting with:*
09.00–10.00	Swedish Association of Local Authorities and Regions (*Sveriges Kommuner och Landsting*)
10.15–11.15	Swedish Association of Independent Schools (*Friskolornas Riksförbund*)

Group 1: Travel to Linköping from Stockholm by train

14.30–16.00	Visit to Teacher Education, Linköping University

Group 2: Travel to Göteborg/Borås from Stockholm by plane

15.30–17.00	Visit to Teacher Education, Göteborg University

Group 2: Travel to Borås

Thursday 16 October

Group 1

Time	*Meeting with:*
08.30–10.00	Municipality of Linköping
10.30–13.00	Visit to a municipal school
13.30–15.30	Visit to an independent school

Group 1: Travel to Malmö from Linköping

Group 2

Time	*Meeting with:*
09.00–10.00	Municipality of Borås
10.30–13.00	Visit to a municipal school
13.30–15.30	Visit to an independent school

Group 2: Travel from Borås to Göteborg, travel to Gällivare from Göteborg

Friday 17 October

Group 1

Time	*Meeting with:*
09.00–10.00	Municipality of Malmö
10.30–13.00	Visit to a municipal school
13.30–15.30	Visit to an independent school

Group 1: Travel to Stockholm from Malmö

Group 2

Time	*Meeting with:*
09.00–10.00	Municipality of Gällivare
10.30–13.00	Visit to a municipal school
13.30–15.00	Visit to a Sami school

Group 2: Travel to Stockholm from Gällivare

Sunday 19 October

- Working group OECD in Stockholm

Monday 20 October

Time	*Meeting with:*
08.30–09.30	National Union of Teachers (*Lärarnas Riksförbund*)
09.45–10.45	Municipality of Stockholm
11.15–13.00	School visits to introductory programmes at upper secondary school
13.30–17.00	Working group OECD, at the ministry

Tuesday 21 October

Time	*Meeting with:*
09.00–10.15	Mr. Leif Levin, Uppsala University, and Representatives from the Educational Research Council (*Utbildningsvetenskapliga rådet*)
10.30–11.30	Education Committee of the Royal Swedish Academy of Science
11.30–12.00	Association for Swedish School Books
13.00-13.45	National Education Committee (*Utbildningsutskottet*)
14.00–16.00	Presentation by OECD to Steering group on preliminary findings and recommendations

Wednesday 22 October

Time	*Meeting with:*
09.00–11.30	Working group OECD, at the ministry
11.30-13.00	*Lunch at Rosenbad* with the Ministers of Education, State Secretaries and other senior ministry representatives

Departure OECD review team

Improving Schools in Sweden: An OECD Perspective

How can Sweden reverse the decline in student performance and make sustained improvements in the quality and equity of its school system? This report analyses the strengths and challenges facing the Swedish school system from an international perspective, and provides a number of recommendations and policy actions to strengthen it. It highlights the need for a comprehensive education reform that will bring about system-wide change and raise the performance of all Swedish schools and their students. The reform should define priorities, establish clear responsibilities across the system, and consistently provide the appropriate support and challenge to schools, municipalities and private organisers in their efforts of improvement. This report will be valuable not only for Sweden, but also other education systems looking to raise their performance.

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Chapter 1. School education in Sweden: Strengths and challenges

Chapter 2. Promote quality with equity across Swedish schools

Chapter 3. Building a high-quality teaching profession

Chapter 4. Steer policy and accountability focused on improvement

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