CHAPTER 3.
POLICY LEVERS FOR QUALITY LOWER SECONDARY IN NORWAY

This chapter presents a set of recommendations to improve the quality of lower secondary education in Norway. They focus on levers that can make a difference in improving student performance and motivation: students, teachers and schools, all within a framework of ensuring effective policy implementation. Each recommendation starts with a comparative framework, follows with a review of the current context in Norway and provides a recommendation with three tangible action steps.

The chapter first proposes the need to align and focus policy design and implementation to the current decentralised structure by focusing on key priorities, raising capacity and using data strategically. It then moves to the need to raise teacher's status in Norway by strengthening initial teacher education, raising the level to a Masters degree, strengthening teaching skills through continuing teacher education and delivering concrete teaching strategies, and defining clear expectations for teachers. In terms of school improvement, it suggests the development of a national strategy to strengthen schools as organisations, to enhance instructional leadership and to give greater flexibility and choice for students. The last recommendation proposes ways to ensure students make smooth and successful transitions from primary into lower secondary and then into upper secondary.

Strengthening lower secondary education is key to improve overall education attainment in Norway and reduce the number and percentages of students that drop out. As reviewed in the previous chapter, Norway's PISA results show strong equity and quality in the performance of 15-year-old students. However, there is scope for improvement and one dimension of this concerns student motivation and commitment to go to school. Measures have been adopted to ensure that all pupils leave lower secondary school with adequate basic skills, provide inclusive and meaningful education for all and encourage local governments and schools to set their own targets consistent with the national targets. Within this framework, the Norwegian Ministry of Education is looking for more targeted approaches to strengthen the quality of lower secondary education.

The challenges facing lower secondary education in general across OECD countries match those of Norway. These focus on the need to adapt teaching and learning to student motivation in specific adolescent ages, of ensuring suitable school environments that cater to their needs, and of supporting effective transitions from one level to the next. Given Norway's system, where local entities have a great capacity of decision making, all of these policy challenges will need to occur within a framework of policy decentralisation.

As mentioned in Chapter 2, Norway is already in the path to improvement, and has been making relevant reforms. Still, Norway needs to have a clearer strategy to improve lower secondary education. It can do so by building on existing policy pathways, prioritising and targeting them to the specific challenges detected. This chapter presents a set of recommendations that together connect the key four dimensions of governance, teachers, schools and students in a state of dynamic equilibrium with one another. These have been developed by a group of international and OECD experts, through comparative analyisis and empirical evidence[1]. Working on these levers can develop reinforcing systems, alignment between their diverse components, and overall sustainability[2].

Box 3.1. Reform principles of high performing education systems

The analysis of high performing countries' policies and practices shows that there are some core principles that need to be present across the education system to achieve good education results. These can be grouped as follows:

- Clear goals related to student outcomes that focus not only on quality but also on equity and that have public understanding and support. These need to be selected carefully and guided by a strategy that aligns the necessary elements, resources and levels of governance to support their attainment consistently.
- A focus on recruiting, developing and retaining excellent teachers and school leaders. This must involve integrated strategies for the professional development of teachers and greater emphasis on the capacity of principals to promote continual improvement in teaching and learning.
- Institutions and infrastructure to support improvement. This implies processes and institutions to engage all relevant partners in public dialogue and the inclusion of the public in school improvement efforts. It further involves an appropriate balance of central direction and local flexibility as well as infrastructure support for improvement across systems and schools.
- An accountability and reporting system that supports the goals and provides information on student learning, outcomes, with attention given to the need to engage teachers in modifying the system on a regular basis.
- While system goals are important, it is also necessary to pay attention to the work of the individual schools where teaching and learning takes place.

Source: OECD (2010a), *Improving Schools: strategies for action in Mexico*, OECD, Paris.

R1. Align policy with governance

Recommendation 1: Align the different levels of governance and resources to ensure effective policy implementation

Caldwell and Harris (2006) identified two key elements that countries need to consider to help all students in all settings achieve high performance levels. The first is ensuring that there are financial and intellectual resources to address the specific needs from students in different contexts. The second addresses the need to set clear national expectations in the form of goals, policies, curriculum, standards and accountability mechanisms.

These two elements need to be carefully calibrated with one another continuously as countries' needs change over time. The adequate governance of a system has to do with the capacity of carrying out everyday policies efficiently, but also with implementing new policies to address improvement, changing needs and expectations. A policy that is

adequately implemented will become less distorted as it goes down through the different administrative levels. This can help the system save significant costs in terms of economic, social and human resources.

One way in which the OECD and non-OECD countries have tried to facilitate implementation and optimisation of policies has been through the decentralisation of decision-making. Decentralisation has been seen as a means to increase the responsiveness of government to local communities, to foster creative management of human resources, to improve potential for innovation and to provide better incentives for improving the quality of schooling (OECD, 2008a). Nevertheless, to work efficiently, decentralised governments need to ensure some basic conditions are met for effective decision making. For example, if a system places most of the decision making responsibility at the levels of the locality and its schools, it not only needs to ensure financial and technical resources, but also must provide adequate capacity building for school leaders, teachers and local administrations to respond appropriately.

It cannot be assumed that all schools have the capacity to change ways of operating when reforms or new plans are implemented. Adequate support for struggling schools is essential. High-achieving systems establish the right balance between local initiative and central efforts of improvement.

In many regards, decentralisation has been a positive step toward better decision making in Norway. Yet, this has also led to dispersion of responsibility and limited capacity for delivery. It seems that the different responsibilities of counties, municipalities and schools are not clearly defined. Among Norwegian educators, the policy priorities of the Ministry and Directorate are not always well understood, or consistently implemented at the municipal and school levels. For example, the Knowledge Promotion sets out in a few pages for each discipline the learning objectives for completion of lower secondary school. This leaves county, municipal, and school leaders much freedom of interpretation in regard to the details of the curriculum and how it should be taught. It functions as a new framework for educators but it provides little detail and no examples of how the actual curriculum might be formulated in each municipality or school. This same ambiguity impacts matters of student assessment, which are so central for achieving public assurance that the school system is meeting its goals. While the document requires that there be assessment for each curricular level and focus, more guidance is needed about the content and forms of the assessment, or on how schools should be evaluated.

Evidence from the analysis of PISA results (OECD, 2010b) show that students tend to perform better in systems where there is greater autonomy for schools to make their own decisions. However, this finding only holds if the autonomy is balanced with adequate accountability measures to share responsibilities and relevant support structures. Otherwise, decentralisation can have negative effects, such as uneven support to schools or to students, uneven distributions of highly qualified teachers or school leaders, or lack of consistency in access to technology, for example.

For increased autonomy to work well, Norway requires greater and smarter definition of responsibilities and actors' engagement with these, fewer and clearer priorities, adequate plans and indicators of success in implementing change at the

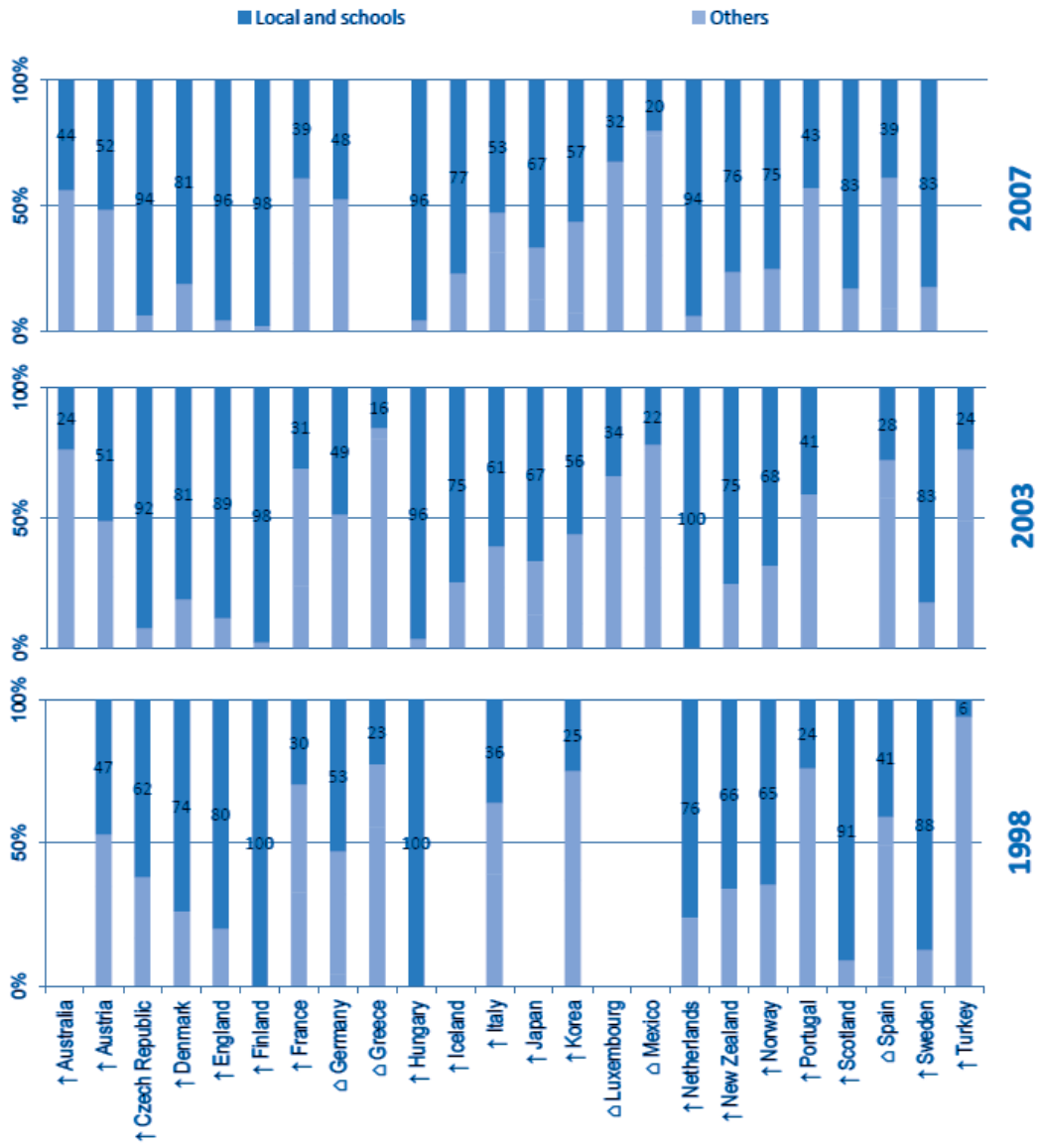
directorate level, more support for school owners, leaders, government, and deeper public understanding of the country's educational goals and strategies. Understanding how decision-making is allocated in the lower secondary education level can be useful to better assess how support and capacity-building should be distributed, and to ensure good implementation of the appropriate policies.

How education decisions are made across countries

There is no single model of how decision making is distributed across countries, but an important trend towards greater decentralisation in the past decades has taken place in OECD and non OECD countries. Between 1998 and 2007, decisions in lower secondary education became more decentralised or remained highly decentralised towards the school or local level in 19 out of 24 countries, including Norway, in the following areas: organisation of instruction, personnel management, planning and structures and use of resources. Some countries with highly centralised decision making in 1998, such as Korea, Italy and Portugal, where less than 36% of decisions were taken by the school and local levels, managed remarkable decentralisation processes and now have about 50% of decision making in the school and local levels in these areas. Conversely, decision making did not change or become further centralised in Greece, Germany, Luxembourg, Mexico and Spain (Figure 3.1).

In most countries shown in Figure 3.1, decentralisation of decision making towards local levels happened mainly between 1998 and 2003. This was more evident for the Czech Republic, Denmark, Italy, Korea, the Netherlands, New Zealand and Portugal. In these countries, the greatest increase in the capacity of decision making of local governance was about 30% (Czech Republic and Korea). From 2003 to 2007 decision making in the same areas continued to become more decentralised or remained highly decentralised in almost all countries with data available, except for Germany, Luxembourg and Mexico.

Figure 3.1. Changes in decision-making in lower secondary education, 1998-2007



↑ : Countries that decentralised or remained highly decentralised (more than 50% of decisions taken by schools and local level).
⌂: Countries that centralised or remained the same (less than 50% of decisions taken by schools and local level).
Source: OECD (1998), *Education at a Glance 1998: OECD Indicators*, OECD, Paris;, OECD (2004), E*ducation at a Glance 2004: OECD Indicators*, OECD, Paris; OECD (2008a), *Education at a Glance 2008: OECD Indicators*, OECD, Paris; OECD (2010c), *Education at a Glance 2010: OECD Indicators*, OECD, Paris..

The result is that most schooling decisions in lower secondary education are currently taken at the local level or at the school level in about two-thirds of OECD countries. In Belgium (Fl.), the Czech Republic, Denmark, England, Finland, Hungary, Iceland, Japan, the Netherlands, New Zealand, Norway, Scotland and Sweden around 70% or more of decisions are taken at these two levels.

In these countries there appear to be two patterns of decentralisation: one where local governments make most decisions or share decision making with schools (5% of less difference), and another where schools make most decisions. Local governments take a key role or share it with schools in Denmark, Finland, Iceland, Japan, Norway and Scotland. In another group of countries, most of the decisions are actually made at the school level, including Belgium (Fl.), the Czech Republic, England, Hungary, the Netherlands, New Zealand and Sweden (Figure 3.2).

Figure 3.2. Decision making in lower secondary education, 2007

Decision making across different levels of government in lower secondary education, 2007

	Central	State	Provincial/ regional	Sub-regional	Local	School
Australia	n	56	n	n	n	44
Austria	27	22	n	n	22	30
Belgium (Fl.)	n	29	n	n	n	71
Czech Republic	6	n	n	n	33	61
Denmark	19	n	n	n	40	41
England	4	n	n	n	5	91
Finland	2	n	n	n	76	22
France	27	n	6	28	n	39
Germany	4	31	17	n	18	30
Hungary	4	n	n	n	27	69
Iceland	23	n	n	n	37	40
Italy	31	n	16	n	6	47
Japan	13	n	21	n	45	21
Korea	7	n	36	n	8	49
Luxembourg	68	n	n	n	n	32
Mexico	30	48	2	n	n	20
Netherlands	6	n	n	n	n	94
New Zealand	24	n	n	n	n	76
Norway	25	n	n	n	40	35
Portugal	57	n	n	n	n	43
Scotland	17	n	n	n	53	30
Spain	9	42	10	n	3	36
Sweden	18	n	n	n	35	47

Note: n= Magnitude is either negligible or zero. Darker cells show higher values.
Source: OECD (2010c), *Education at a Glance 2010: OECD Indicators*, OECD, Paris.

As the data shows, Nordic countries have strong local autonomy which they have experienced for a long time already. Finland is in some ways exemplary in this regard. Finland decentralised its public administration in the early 1990s, where a rapid shift of authority of public sector management and financing to municipalities had three consequences. First, it increased the need for stronger educational leadership in schools and municipalities. The government invested in leadership training and municipalities begun to recruit their school leaders and education authorities by using selection methods that emphasise adequate competences and knowledge. Second, new freedom in schools and municipalities was followed by national policies that promoted both self-evaluation and monitoring of local initiatives at the national level. Third, decentralisation also

triggered local initiatives that included innovations in pedagogy, school organisation and local level management. These transitions indicate that decentralisation, when implemented optimally, requires continued government investment as well as policies that support self-reflection and innovation at local levels.

The role of municipalities therefore appears equally as important as that of the school, both in Norway and in the selected group of OECD countries. However, how countries support the skill levels and leadership at the municipal level seems to vary greatly and to have real impacts on teacher quality and student learning.

The challenges of governance at the local level: municipalities and schools

In Norway, financial resources are allocated by the state as unrestricted block grants to municipalities, and the municipalities and schools decide how to allocate the budget themselves. This high degree of local control leads away from more systemic alignments. In several studies, the Norwegian education system is ranked as one of the least efficient among OECD countries. An analysis performed by Borge and Naper (2006), for example, showed that only 14 out of the 426 municipalities observed appeared to allocate funds efficiently. The consequence is that Norway's school expenditures do not translate into improved student performance. At least part of this performance deficit would appear to be a result of systemic inefficiencies. The estimation results revealed that municipal revenue contributes to high student achievement and high resource use per student. Those schools that managed greater efficiency did so mainly by using fewer inputs, rather than by improving their performance with some exceptions. While input may vary according to municipalities, outputs may not necessarily be directly related to them. This seems to indicate that how resources are used by school owners and school staff at different municipalities and schools can make an important difference for student learning. Yet, according to PISA data, it appears that Norway is one of the countries with the lowest variance in student performance between schools in relation to school resources (OECD, 2010d).

Part of the high cost of education in Norway may be attributed to the dispersed rural population and the large number of schools across its vast territorial expanse. A high number of teachers per student, small classes, extra resources, and teaching hours below the OECD average are factors that increase the costs of education without necessarily entailing gains in student learning. In the case of lower secondary education, municipalities with more scattered populations have higher expenses per pupil than those in more urbanised areas (OECD, 2008b). This issue has been tackled recently: in 2007-08, 154 schools of primary and lower secondary education closed in Norway, although this was not only because of the high cost of schools, but also due to the low number of students, especially at the primary education level.

A major question that rises from this considerations then is how lower secondary education in Norway can become more efficient and effective with the resources allocated. A part of the answer could lie in analysing and then changing the structure and distribution of education institutions, in terms of primary, lower and upper secondary education. It may be possible to encourage experimentation to explore what synergies could be fostered among the different levels.

Among Nordic countries, conditions differ slightly, but objectives tend to converge. In most Nordic countries, lower and upper secondary schools are governed by the same authority that is a municipality. In all these countries, compulsory education ends when students graduate from nine or ten-year basic school. This means that upper secondary education is voluntary. Yet, all the governments in Scandinavia, including Norway, have set a high target for upper secondary education completion. Denmark wishes to reach 95% upper secondary education graduation rate. In Finland and Sweden the aim is similar.

Norway is facing similar challenges with its governance structure as other Nordic countries. The regional administration consists of 18 counties and the city of Oslo. Norway, Denmark and Finland have about the same population, but Norway has a dense network of 430 municipalities, while Finland has 336 municipalities and Denmark has only 98. All these administrative entities have some educational responsibilities.

When decentralisation increases, local level capacities to lead and monitor educational functions become more important. Although the OECD-Norway Steering Group did not visit any small remote municipalities it is likely that capacities to cope with new educational leadership situations well are very different in such a dispersed group of municipalities and counties. In Finland, for example, 15 years ago the number of counties was 12 and municipalities were 450. There are six counties today and the number of municipalities is about to decrease to 100-200 by the end of this decade. One important driver of merging municipalities has been the prospect of offering better educational services to citizens. Norway may wish to study this process in Finland to determine if there are some advantages that accrue to schools as a result of greater consolidation of counties and municipalities.

Practices in some Nordic countries suggest that better alignment of implementing these and other comprehensive education policies can be achieved when all pre-university education is governed by the same administrative level or there is close articulation. One benefit of closer articulation between primary, lower and upper secondary education, is better use of human resources. When lower secondary school has a shortage of science or foreign language teachers, for example, this could be fixed by utilising teachers from upper secondary schools. In Norway, some teachers in lower secondary schools teach with a minimal level of academic training. This may lead to a situation where a teacher teaches physics or mathematics with inadequate subject knowledge. When teachers and school leaders in lower and upper secondary schools are employed by the same public administrator or at least a close coordination of responsible bodies, opportunities to provide better teaching to students and professional development support to teachers would improve.

In Norway, as in some other OECD countries, the lower secondary school is the "sandwich" between primary schools owned by municipalities and upper secondary schools owned by counties. Any gaps that exist between the different school owners may currently need to be resolved by principals with little guidance or support. While this structure may not always cause misalignment of educational objectives and practices, it certainly sets up potential for alignment problems. The lack of smooth coordination between different governing authorities may contribute to students' experiencing difficulties in transitions between the different education levels. It may also damage the

ease of creating professional development opportunities for teachers that span the different levels of the system since school owners are responsible for teacher professional development and may not carry it out in compatible ways.

Closer coordination between municipalities and counties to reach more alignment between objectives and means has shown positive results in Nordic countries. For lower secondary education, it is important that there are links with those looking after upper secondary education – the countries. Over the longer term, merging municipalities or giving a coordinating role to counties could help in increasing alignment while maintaining local democracy and engagement. Overall, for decentralisation to be sustainable over the long run, it is important to enhance capacity at the local level to deliver education improvements.

In addition to the county-municipalities structure, the organisation of municipalities can also make a difference in the provision of education. Municipalities have different management models: three level municipalities have their own school offices and chief municipal education officers who manage the schools. Two level municipalities have less staff, and school principals directly report to the chief municipal executive. Some municipalities have set up local governing boards (Hegtun and Ottesen, 2007). The result is large variations in capacity, guidance and support by municipalities to schools, leaders and teachers in the delivery of education. For effective governance in this large structure, it is important that municipalities have adequate capacity and support to deal with the delivery of education.

It is also relevant to highlight that while schools have great autonomy in Norway, in practice teachers and school leaders perceive themselves to be quite restricted. The reasons may be that there is too little advice about how to interpret laws and regulations. For example, in regard to grouping students by ability, the OECD-Norway Steering Group heard both that schools are too restricted in using their judgment about when ability grouping is appropriate, and that ability grouping goes on in ways that are contrary to the spirit of the law. On a topic of such significance, the resolution to the difficulties schools experience may not come through decentralisation or centralisation but rather better access to information. Schools should have clear guidance and advice when there are questions about how and when it is legal to group students for pedagogic success.

Developing a common view to ensure alignment

One way of having better alignment in the delivery of education in a decentralised environment is by ensuring a common view shared by those working across the system and providing support to help carry out these decisions. In Norway, the development of a centralised curriculum (the Knowledge Promotion) provides the possibility for this common view. Yet, greater clarity and communication of the guidelines are one of the most immediate challenges facing Norway.

There are different examples of education systems which use the curriculum as the steering strategy, giving freedom to local levels or schools to adapt it to their needs. In Scotland for example, where decision making is shared between local authorities and schools, a curriculum for excellence has been developed by Teaching and Learning Scotland. This curriculum is designed so as to give coherence and flexibility for those

learning from ages three to 18. It aims to include the learning experiences of students wherever they are being educated (Learning and Teaching Scotland, 2011).

In England, while most decisions happen at the school, there is a national curriculum and a well known and developed system of standards for teachers, school principals and student achievement supporting the system. Implementation of the most recent National Curriculum started in September 2008, with the aim to enable schools to raise standards and help its students "meet the challenges of life in our fast changing world." The curriculum defines the statutory programmes of study and the attainment targets for all the compulsory stages of education in England and there is information and support to schools as to how to deliver it (Department for Education and Skills, 2011).

In the Netherlands most of the decisions taken at the school are made under a central framework. Under this framework, Dutch schools are required, for example, to: prepare an annual plan for the school; perform a self-assessment and improvement programme; provide information to parents and students and a mechanism for filing complaints, and; develop a system for monitoring the performance for students (Caldwell and Harris, 2006). In the Dutch context educators have enormous flexibility to develop their own curricula, to explore innovative approaches in using technology, and to establish their own strategies for engaging parents and other community members in schools.

Finland provides another example of how a jurisdiction balances a broadly decentralised approach with some national leadership and steering. As explained in the OECD Improving School Leadership Report (Pont, Nusche and Hopkins, 2008), Finland's National Curriculum sets a broad curricular framework and gives the overall policy direction to schools. Despite being a broad steering system, the National Curriculum provides an important capacity for decision-making to the country's trusted municipalities. Among the powers granted to municipalities are the capacity to decide how budgets will be allocated in health, education and social services, designing and distributing curricula that are specific to the schools and the municipalities, determining appointment criteria for principals and, conducting self evaluations.

Projects in Finland are also always strongly supported by collaborative networks (as shown in the Student Pathways recommendation) with national authorities and feedback mechanisms from stakeholders. Teachers have an important participation in school-based and local processes and curriculum development. Networks act as efficient diffusers of good practices "not linear processes of learning and experimentation". Therefore, around the centralised curriculum, the education system in Finland is strongly supported by "a pattern of system leadership within strong cultures of lateral and vertical teamwork, networking, participation, target setting and self evaluation. "Finland, as Norway, also rests on a culture of high trust, actively engaged and co-operative professional relationships" (Pont, Nusche and Hopkins, 2008).

Decentralisation hence shifts authority but it does not necessarily mean reducing central government support and steering. The recommendations in this section focus on providing guidelines on how to align the system for effective decision making.

How to align the different levels of governance and resources to ensure effective policy implementation.

Recommended Action Steps

1. Define and develop clear implementation strategies: Define a vision and communicate a few key priorities for lower secondary education to achieve higher student engagement and performance and use the Norwegian Directorate to develop clear implementation strategies that engage those working across the system. Develop public information campaigns and ensure student and parental engagement in the process.

There are some essential conditions for the improvement of school outcomes. Making significant improvements in system-wide educational outcomes is a complex task, which requires a multi-faceted approach that addresses many of the major components of the system. No single element may be sufficient for progress, but most are necessary. At the core are policies that focus on improving teaching and learning, including curriculum, teaching and leadership.

At the same time, while it is vital to have the right policies, it is just as important to have well-developed means for implementing those policies across school systems. Policy design must take into account the context and possibilities for implementation; there is no point adopting policies that cannot realistically be put into place. It is critically important that Norway focus attention on policy implementation and the governance levers that can enhance professional capacities and thereby improve delivery.

Norway's governance challenge in improving lower secondary education (and school performance overall) is common in countries with strong democratic traditions and a high value for decision-making at the grassroots level. The challenge is to have the right balance of autonomy at the local level while giving clear direction and support from the ministry and directorate. Success is most likely if there are a few high level priorities, these priorities are carefully defined, their rationale explained, data provided to track progress, and sufficient detail is provided so that schools and municipalities know what success looks like.

At present, there does not appear to be any Ministry or Directorate strategy designed to engage the municipalities in supporting the agenda of more effectively engaging lower secondary school students in school and improving outcomes. Overall, policy reform is carried out mainly through white papers, but the different stakeholders interviewed could not identify a clear strategy that would ensure that the directives in the white papers were permeating the policy community or the county and local levels of government. All indications are that Norwegians greatly value education, but general support must be shaped through a clearly framed message about the government's goals and the specific problem it is trying to solve.

A set of three key priorities that Norway could draw upon can be based on the different challenges outlined in this report, in alignment with those priorities set in the

White Paper on Quality Education for improved student achievement (Ministry of Education and Research, 2007-08):

1. Improving student motivation and attainment at the lower secondary level;

2. Enhancing teacher quality;

3. Ensuring all lower secondary schools have the strategies and capacity to support student motivation and improvement.

These priorities could be clarified by the Ministry of Education and then be used to promote progress at the school, municipality and county level, to allow for balance between the local and the national level, a central challenge for Norway.

To provide support, the Directorate for Education in Norway has a range of projects targeting the different challenges facing schools. However, from the analysis of the OECD-Norway Steering Group, it appears to be operating too much on the basis of short-term, weakly connected projects to fix specific problems rather than with an overall strategy for systemic change. Valuable recent initiatives need to be related to one another more strategically. These include new programmes related to principal training and support; whole school improvement; the development of assessments; and improvements in school environments. Each of these is of vital importance for the future success of the Norwegian school system. Their impact can be enhanced if they are linked together to accomplish a larger goal, and how outcomes relate to each other and will be tracked and measured.

Experiences from other Nordic countries indicate that having a strong, professionally oriented central agency for educational development (such as *Skolverket* in Sweden and *Utbildningstyrelsen* in Finland) can play a critical role in translating the policies into action on the ground. This role could be performed by the Norwegian Directorate. The Directorate could liaise with other entities in charge of implementing education policies across the system, such as municipalities and county governors, to coordinate how policies can be communicated, implemented and gradually improved.

There must also be incentives for local implementation and a consistent plan for assessing success and some sanctions and/or additional supports for schools and municipalities in difficulty. One possible incentive for municipalities to improve student attainment in lower secondary could be to add completion rates in schools' funding formulas. In other words, school or municipality level completion rates would affect the overall funding after recurrent expenditures are covered. Put simply, if there are too many policy priorities or lack of incentives, the risk is diffusion or inconsistency in implementation.

Within this framework, it is important to build public will to improve achievement. The use of mass media could be used in combination with outreach to local communities. These require consistent action and capacity enhancement on the part of all key stakeholders. Below some strategies are suggested:

- The government needs to build trust in the public schools by enlisting parents and families as partners who support student success and reinforce the schools' messages at home and in the community.

- A separate strategy can focus on engaging young people themselves. Because young adolescents are often regarded as being in a challenging age, among other public media strategies, the Directorate might highlight the altruistic and academic achievements of lower secondary school students. The Directorate may wish to experiment with the social media that are popular among young people themselves to engage them in ongoing dialogue and exchange about improving lower secondary schools.

- Finally, part of this public relation should showcase the work of teachers who get particular joy and satisfaction in working with this age group. Recent government efforts appear to be resulting in larger numbers of applicants to teacher education programmes. The teachers' unions might also be engaged as they have interest in raising the status of the profession. Rather than emphasising how challenging teaching can be, communication to society should highlight the importance of this profession.

2. Reinforce the role and capacities of policy makers at the different levels of the system: In a decentralised environment, striking an appropriate balance between central direction and local flexibility requires strengthening the role of key players, such as the county governors and municipality education authorities to ensure the implementation and adaptation of priorities and the curriculum from the Knowledge Promotion reform in lower secondary. This includes ensuring that they have the appropriate information, support and skills to manage and deliver.

The key implementation challenge for Norway is to build the capacity of leaders at the local level to ensure they are well prepared and are supporting the Knowledge Promotion. To do so, requires several actions:

- To ensure that key officials understand the purpose of the Knowledge Promotion, the Directorate must provide school owners and leaders with more detail about how to translate it into the locally determined curriculum.

- There must be clear directives about outcomes for which these officials will be accountable.

- School owners and leaders must agree to common language and shared aspirations to meet their collective responsibilities. In the case of school leaders, they play dual leadership roles—an external one in which their partners are school owners; and an internal one in which they lead the instructional programme of their schools (the internal role of school leader is treated in the section on school improvement).

Ensuring alignment with the country's educational goals can be a challenge given the current structures. In addition, the evidence points to a variation in capacity and results across municipalities, with smaller rural municipalities having lower student

achievement. A possible response could eventually be the consolidation of smaller municipalities as Finland has already done, but this is beyond the scope of this report, or a rationalisation of schooling responsibilities. In the current governance structure, it calls for the Directorate to ensure that every municipal and county education official and the school leaders of all 1 200 lower secondary schools have the capacity to work together to deliver the country's agenda.

One approach adopted by countries with similar structures is to maintain and strengthen the role of the national curriculum as the guiding principle and key policy lever, with the requirement that the regional and local level participate in its development and have the capacity to adapt it to their context. A participative approach to the revision of the national curriculum and to the formulation and implementation of standards will help actors better understand and put into effect the reaches and limits of their roles. But it also requires efforts to ensure that there is consistent information, and training if needed for municipality officials who are dealing with education on how to deliver.

Beyond the capacity of municipalities, delivering the education agenda requires strategies to promote professional development for teachers, to increase school leaders' abilities to serve as instructional leaders, and to engage students and families in education. The schools and students that are at most at risk are those with a small number of students and that are far from municipal centres and other schools. These are covered in the rest of the recommendations.

3. Build a culture of evidence using data strategically: Use and manage data in a systematic way to signal priorities and support improvement for lower secondary education by tracking and reporting on a limited set of key progress indicators. Create incentives for municipalities and counties to improve information management (for example, on the financing of lower secondary education) and thereby improve the system's accountability, shared responsibility and efficiency.

The best way to move towards improvement is by using data to make informed decisions about adequate programmes and practices. In this sense, the Directorate can be very helpful in fostering guidance through results, without necessarily having to establish intrusive "audit and compliance" practices.

Important contributions can be made by strengthening recent efforts to gather and use information strategically. Ensuring that good data systems are in place that can follow student progress and school performance is one of these undertakings. During this process, it is also important to ensure that there are adequate analytical skills at the different levels to make good use of the data. Building a culture of evidence in which a few key indicators are tracked with benchmarks for improvement and goals established will go a long way toward reinforcing government priorities. The selection of indicators, of course, must be preceded by the establishment of a consensus about policy priorities. These will help define:

a) What data is needed in order to carry out a decision;

b) How these data should be collected (methodology in general), and;

c) The ways these data will be used.

The Directorate should have the ability to collect at least some of the following standard indicators for tracking progress:

- Ability to identify and follow students who enter lower schools level with weak records (high absenteeism, discipline problems, and problematic teacher evaluations);
- Ability to track moderate and high-achieving pupils to ensure that their interest in school is sustained and strengthened;
- Ability to track whole school outcomes and to compare similar schools with different outcomes;
- Ability to track demographic groups whose background and performance historically predicts that they are at particular risk of low achievement;
- Ability to process information and analyse the economics of education regarding schools and teachers.

The Steering Group identified an additional challenge: the inconsistent use of research to inform policy design. Often such problems are a result of timing—it takes years to collect evidence, and policy makers need to make decisions quickly about which policies are succeeding, which require adjustment, and which should be phased out. This is all the more reason to have few priorities, invest strategically and parsimoniously in research and evaluation, and carefully assess interim trends. The Steering Group did not hear much about either data driven or research-based decision making, although there are a substantial number of evaluations going on. The new Centre for Education Research within the Norwegian Research Council should address this issue. As described, the task of compiling systematic overviews of Norwegian and international educational research and make this knowledge available to the authorities and other users could go a long way toward solving this problem.

In the same way, increased decentralisation requires clear lines of responsibilities, transparency and good management structures. However, higher spending in lower secondary education (beyond a certain basic level) is only tenuously linked to better student learning outcomes (OECD, 2007). According to PISA, the overall lack of a relationship between resources and outcomes does not show that resources are irrelevant, but that their level does not have a systematic impact within the prevailing range and it also depends on that resources are used efficiently.

If most or all lower secondary schools have the minimum resource requirements to allow effective teaching, additional material resources may make little difference to outcomes. Some hints on how to optimise expenditure are offered in PISA 2009 results. For example, PISA shows that higher teachers' salaries are more associated with better student performance than smaller class sizes. Teachers' salaries are related to class size in that if spending levels are similar, school systems often make trade-offs between smaller classes and higher salaries for teachers. The findings from PISA suggest that systems prioritising higher teachers' salaries over smaller classes tend to perform better, which

corresponds with research showing that raising teacher quality is a more effective route to improved student outcomes than creating smaller classes(OECD, 2010b).

The OECD-Norway Steering Group believes that there is room for better financial monitoring and research on better financing of education in Norway, although it is our understanding that good research on these aspects is already taking place (For example, Borge and Ronning, 2009; Hægeland, Raaum and Salvanes 2008). In addition, more research could be made regarding the financing of schools within municipalities and the economic governance within schools. Information and data alone are not enough, however. It is important that schools and their owners have clear economic incentives to enhance their economic performance and look for more efficient structures and practices.

R2. Nurture excellent teaching quality

Recommendation 2: Raise the status of teaching and improve teacher performance through better initial teacher education, professional development, standards and incentives.

Prior to the release of the first round of PISA results in 2000, teachers in Norway in many ways enjoyed the status of teachers in what have been described as "first way" school systems (Hargreaves and Shirley, 2009). Teachers in these contexts had great freedom and professional autonomy; their school leaders almost never intruded into their instruction. The public trusted teachers implicitly and left them alone to get on with the job. Social welfare benefits were generous and a climate of good will characterised teachers, students, and parents alike.

The results of the first PISA assessments created a PISA shock in Norway similar to that experienced in Germany (Hopmann, Brinek and Retzl, 2007). While Norway avoided the dramatic shifts to standardised curricula and more testing and surveillance that characterised "second way" reforms in the United States and the United Kingdom, guidelines for standards and curricula have been created through the Knowledge Promotion reform and the initial education of teachers has received greater attention.

Strengthening teacher quality has been an important area of focus across countries, including Norway. The evidence on what makes a difference to educational attainment of students' points to a key factor: teachers. "The quality of an education system cannot be higher than the quality of its teachers." The most direct and effective way of raising education quality is to modify teacher education and recruitment, and to develop ways to improve knowledge and skills of in service teachers (Darling-Hammond and Snowden, 2005).

At present, the status of teaching is not as high as it should be in Norway, especially for lower secondary education teachers. While teachers are motivated, they require more knowledge preparation, with better support and incentives to attract top candidates and to strengthen those already in the profession. Arguably, the single most urgent action Norway can take to improve results in compulsory schooling and lower secondary in particular is to strengthen the quality of teachers for that level.

A strong teaching force has several characteristics. Teachers are trusted as professionals and have the high regard of the public. Well-prepared people enter teacher education in a competitive selection process. Teachers are well-paid, educated in the subjects they teach as well as in learning theory, are evaluated regularly, are afforded opportunities for continued learning, and are offered opportunities for advancement within the profession (OECD, 2005; Barber and Mournshed, 2007; OECD, 2011). The country recognises the value of educators as the creators of the next generation of human capital who are critical to the health of the country.

From the analysis and meetings during the Norway review visit, it appears that some of these dimensions of professionalism are weakly developed currently for teachers in the Norwegian context. Yet, the resources, the will, the knowledge and many of the steps required are underway in Norway to ensure that the teaching profession is stronger in terms of initial teacher education and continuing teacher training. A recent set of reforms should contribute to improve the quality of lower secondary education teachers:

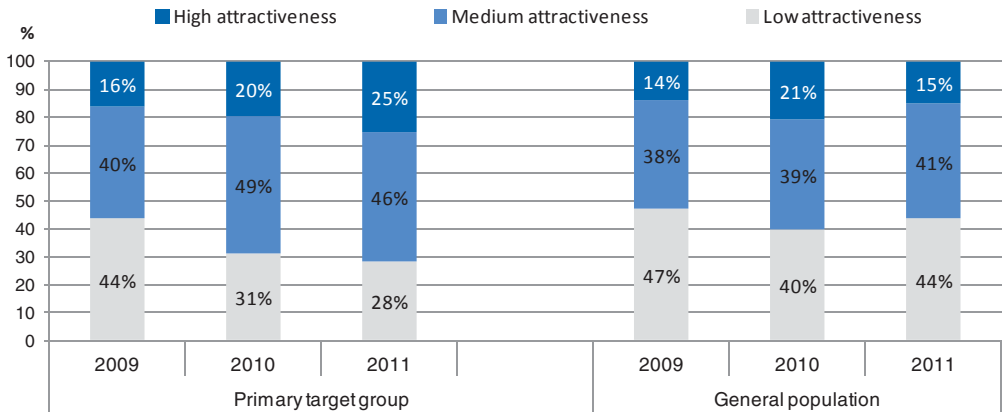
- The *teacher education* reforms summarised in the *White Paper on Teacher Education* (2008-09) are coming into force between now and 2014. These cover the recruitment of teacher education candidates, tertiary education, follow-up and support for new teachers in the form of mentoring for all newly qualified teachers, strengthening recruitment paths into teaching, and developing centres of teaching excellence.

- The permanent strategy Competence for Quality provides *continuing training opportunities* and funding for in-service teachers. Within this framework, a Strategic Plan for Competence Development 2005-08 launched an important national effort to upgrade teachers' in-service training to help with anchoring the Knowledge Promotion curriculum in teachers' lesson planning.

- The GNIST (for "spark", in Norwegian), is a five-year partnership started in 2008, between the Government and education stakeholders to highlight the significance of teachers in Norwegian society with actions to enhance five key aspects: 1) the status of the teachers; 2) the quality of teacher education; 3) the quality of the teacher profession; 4) the quality of school management; 5) the recruitment into the teaching profession and teacher educations. Measures, focused on training and raising awareness are either initiated by the partnership itself, or together with the authorities.

In fact, data provides evidence of progress. On one hand, a survey measuring teacher status in Norway, undertaken three times recently (January 2009, January 2010, and January 2011) shows an overall increase of the status of teaching as a profession, especially in the eyes of younger people, the ones most likely to apply for teacher education. From 2009-11, the percentage of young adults 18 to 23 who said that the teaching profession had high "attractiveness" moved from 16% to 25%. This is not so clear in the eyes of overall adult population 18-55, which a more varied pattern (Figure 3.3). In addition, there has been an overall increase in enrolments into teacher education in Norway, with an increase of 47% in the number of applications for primary and lower secondary education.

Figure 3.3. How Norwegians view the teaching profession, 2009-11,



Source: Data provided by the Ministry of Education and Research, Norway.

So, at present, it seems that the path for success has been set, and there is no need for new large scale policies. Instead, the country needs to proceed with prioritising and implementing key levers that already exist in paper to ensure Norway will be able to recruit sufficient new teachers and develop those in the profession to meet demand and respond to the current learning challenges. This is urgent, as Norway may be reaching a teacher shortage crisis: according to Statistics Norway, many teachers will be retiring in the next five years, while at the same time, the number of 13-to-15-year-olds is going to increase annually by at approximately 2 000 students per year from 2017-25 (Statistics Norway, 2010), requiring more qualified teachers at the lower secondary level or an increase in class sizes.

The challenges of initial teacher training for lower secondary education

The quality of initial training for teachers is not in line with the teaching workforce that Norway is looking to harness if the country is to improve student results. Entry requirements for teacher colleges in Norway have been low and standards within teacher education colleges vary widely. Some small, rural teacher education programmes can only offer a very limited threeyear programme. Before 2005, admission was not selective, and today despite modest entry requirements, there is a shortage of qualified candidates (OECD, 2008b), although more recent data shows an increase in the number of students enrolled in teacher education programmes (Table 3.1).

Table 3.1. Student admission into teacher education programmes, Norway 2008-11

	2008	2009	2010	Change (%) 2008-2009	Change (%) 2009-2010	Change (%) 2008-2010
Four-year bachelor (GLU)	2007	2339	2782	17	19	39
Five-year integrated master	590	677	714	15	05	21
Subject teacher education	372	470	528	26	12	42
Master + one year pedagogic training (PPU)	2126	2345	2667	10	14	25
Total	5095	5831	6691	14	14	31

Source: DBH – Database on higher education, Norway: http://dbh.nsd.uib.no/

Half of lower secondary teachers in Norway have predominantly four years of training (three-year BA and a year of teacher preparation), another 25% have a first degree and 25% have a master's degree (OECD, 2009). Teachers with a university master's degree in a content area predominate in more populated areas, such as Oslo. But recent data shows a change in trends in enrollments.

The result is that for lower secondary teachers, weak preparation is especially problematic: too many teachers have generalist training and lack expertise in the subjects they teach, especially in small schools in less populated areas. The theme that Norwegian lower secondary school teachers are insecure in the academic content knowledge in many domains came across consistently in many of the OECD-Norway Steering Group interviews as well as in many reports. A recent study on recruitment and retention of high quality teachers in Norway shows that university graduates who go into teaching have lower grades, and that those with high grades are less likely to become teachers (Mastekaasa, 2011).

It is then compounded by the fragmented nature of governance since local authorities are responsible for determining teachers' in-service professional development. Some have suggested that the Knowledge Promotion curricula has led to a certain "theorisation" of course content, and this could contribute to a lack of engagement that increases during the years pupils are in lower secondary. As a consequence, teachers are unable to adequately respond to students needs, and to challenge their strong students while supporting weaker ones. At the same time, they do not receive training to advance active learning, which may lead to difficulties in engaging adolescents in learning.

In addition, the Knowledge Promotion reforms grant autonomy to teachers in delivering the curriculum, but teachers in Norway have not been systematically prepared for this. Maybe because they have received their pre-service teacher education based on a narrow instructional repertoire, they do not appear able to take advantage of this flexibility to pilot new ways to engage lower secondary school students. Flexibility is not especially advantageous to teachers who are unfamiliar with a broad repertoire of teaching practices and do not know how to modify these to best serve the students in their classrooms. Success rather depends on the capacity of individual teachers who have a strong repertoire of practices, a respect for evidence, and on creative and supportive school leaders.

The government has responded to the teacher education challenge by developing a new teacher education programme to be introduced in 2011 with a stronger emphasis on

subject knowledge and teaching skills, quality of studies and research orientation. It will provide two equal programmes aimed to the different levels of schooling, primary and secondary, with more pedagogy and pupil related skills (Box 3.2).

Box 3.2. Teacher education programmes for primary and lower secondary, Norway

There are currently three teacher education programmes in Norway for primary and lower secondary school levels:.

Four-year bachelor degree programmes: In 2010 a two new teacher education programmes for primary and lower secondary level was launched leading to a bachelor degree (White Paper No. 11, 2008-09). The ***programme GLU 1-7*** prepares teachers for primary level (grades one to seven), and the ***programme GLU 5-10*** prepares teachers for lower secondary level (grades five to ten). Both programmes are located in universities and university colleges.

Both GLU 1-7 and GLU 5-10 are integrated programmes and cover academic course work and practice course work (field placements). Mathematics and language are given in all programmes and in addition most institutions provide a wide range of subject specific courses. All programmes offer courses in pedagogy, subject didactics and field placements.

Master degree programmes: The Teacher Education programmes at universities are based on either an integrated five-year master's degree (LEP programme) or a masters degree with a one-year pedagogical training on the top (PPU). These programmes are offered at Universities and have been in place since 2003 (A new framework for Teacher Education programmes for grades 8 to 13 is expected to be proposed in 2012).

The ***Teacher Education Programmes (LEP and PPU)*** qualify for work as a teacher in upper primary and lower and upper secondary school as well as adult education. The major components of the programme are classroom practice (field placements), educational theory and didactic theory (linked to the school subjects the students are going to teach).Field placements (practice) lasts between 12 and 15 weeks.

The Practical and Didactic Teacher Education programmes (PPU) prepare teachers for lower secondary and upper secondary level (grades 8-13). It is a one-year course for students who have completed the required studies in the Humanities, Social science or Natural Sciences at the University Colleges or Universities. This programme is also offered alongside the subject studies as a part of a five-year education programme (LEP programme).

Much of the international evidence points to the need to raise teacher skills by raising the bar of initial teacher education or the duration of the programmes or moving them to universities with more research capacity. Raising the bar and ensuring that candidates for teacher education are high level has a positive effect on teacher quality, and this also makes teacher education more appealing to potential new recruits. Best performing education systems use rigorous checks to assess potential to become good teachers (Barber and Mourshed, 2007). At the same time, teacher education is important because of its impact upon teacher quality. Teacher education not only ensures that teachers are – and remain competent, but it also ensures that they stay motivated through time (Eurydice, 2004 in Musset, 2009, Mastekaasa 2011).

Most high performing countries have a high status teaching profession signalled by a Masters degree: raising the level not only raises the knowledge and skills of teachers, but also signals the status and importance of the profession. In Korea for example, teacher education programmes were increased from four to six years of studies to a Masters level. In Finland, all teachers are required to have a Masters degree and this has been seen as contributing to the teaching profession high status and attracting competent candidates (OECD, 2005). A Masters degree can enhance subject matter and didactics capacity, to contribute to improve lower secondary school teachers' efficacy (Box 3.3).

Box 3.3. Research-based teacher education in Finland

Research-based teacher education means that integration of educational theories, research methodologies and practice all play important roles in Finnish teacher-education programmes. Teacher education curricula are designed so that they constitute a systematic continuum from the foundations of educational thinking to educational research methodologies and then on to more advanced fields of educational sciences. Each student thereby builds an understanding of the systemic, interdisciplinary nature of educational practice. Finnish students also acquire skills of designing, conducting, and presenting original research on practical or theoretical aspects of education. An integral element of Finnish research-based teacher education is practical training in schools, a key component of the teacher education curriculum. Subject-teacher students spend about 15 to 20% of their pedagogical studies in practical training.

Finnish research-based teacher education programmes culminate in a required master's thesis. Prospective primary school teachers normally complete their theses in the field of education. Typically, the topic of a master's thesis is focused on or close to a teacher's own school or classroom practice, such as mathematics teaching or learning. Subject-focused teacher students, in turn, select a thesis topic within their major subject. The level of scholarly expectations for teacher education studies is similar across all teacher-preparation programmes, from elementary to upper secondary school.

Currently, Finnish universities offer a two-tier degree programme. A three-year bachelor's degree programme qualifies students for a two-year master's degree programme that is the minimum qualification for the license to teach in Finland. These two degrees are offered in multi-disciplinary programmes consisting of studies in at least two subjects. Studies are quantified in terms of credit units within the *European Credit Transfer and Accumulation System* (ECTS). Teacher education requirements are 180 ECTS credits for a Bachelor's degree (which does not meet qualifications for a Teaching Diploma or enable permanent employment as a teacher), followed by 120 ECTS credits for a master's degree.

A broad-based teacher education curriculum ensures that newly prepared Finnish subject teachers possess well-balanced knowledge and skills in both theory and practice. It also implies that prospective teachers develop deep professional insight into education from several perspectives, including educational psychology and sociology, curriculum theory, student assessment, special-needs education, and didactics (pedagogical content knowledge) in their selected subject areas. All eight Finnish universities offering teacher education have their own nationally coordinated teacher education strategies and curricula, ensuring coherence, but encouraging local initiative to make best use of each university's resources and nearby opportunities.

Source: Sahlberg, P. (2011), *Finnish Lessons: what can the world learn from educational change in Finland?,* Teachers College Press, New York.

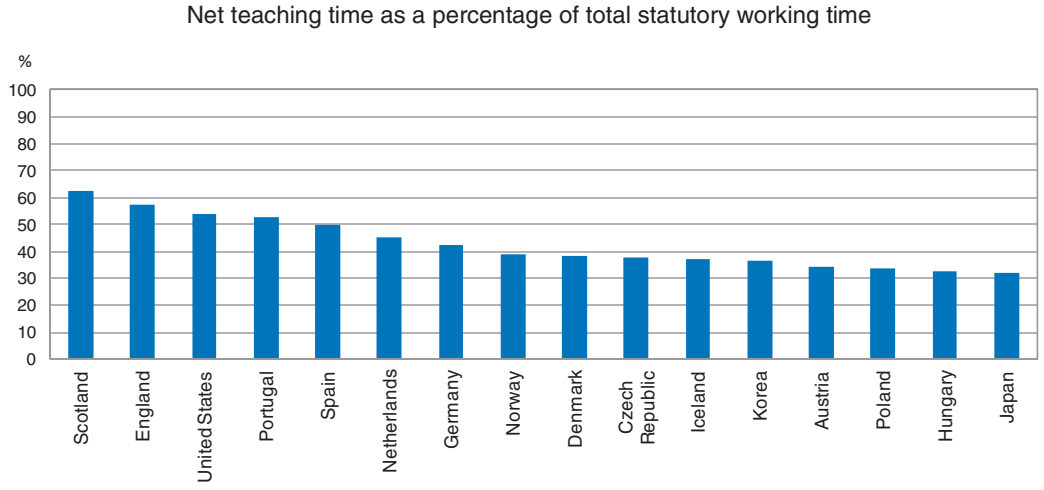
Norway has taken the gradual approach to ensure that all teachers in primary and lower secondary education have a master's degree. A new project aims to offer 800 places at master's level for primary and lower secondary school teachers by 2014. The aim is to decide whether to implement a five-year Masters' programme based on the results of this study. This gradual approach seems to be weak in light of the actions needed to support teacher quality right away. Preparing teachers with only a bachelors degree in teacher training institutions with weak research capability limits the time that they have available to master subject matter didactics and to study recent research on

adolescent psychology that could contribute to their efficacy as lower secondary school teachers. At the same time, providing longer initial education needs to be considered against the costs of providing longer in service training for teachers, which could diminish the prospective supply of teachers as it could discourage potential aspirants to engage.

Conditions for teaching are not as good as they could be

Norwegian teachers have some of the lowest number of teaching hours in the OECD countries. In fact, a more detailed analysis shows that teachers in Norway have a smaller amount of teaching time with students, but spend a large amount of time at school in lower secondary education (Figure 3.4).

Figure 3.4. Percentage of lower secondary teachers' working time spent teaching, 2008



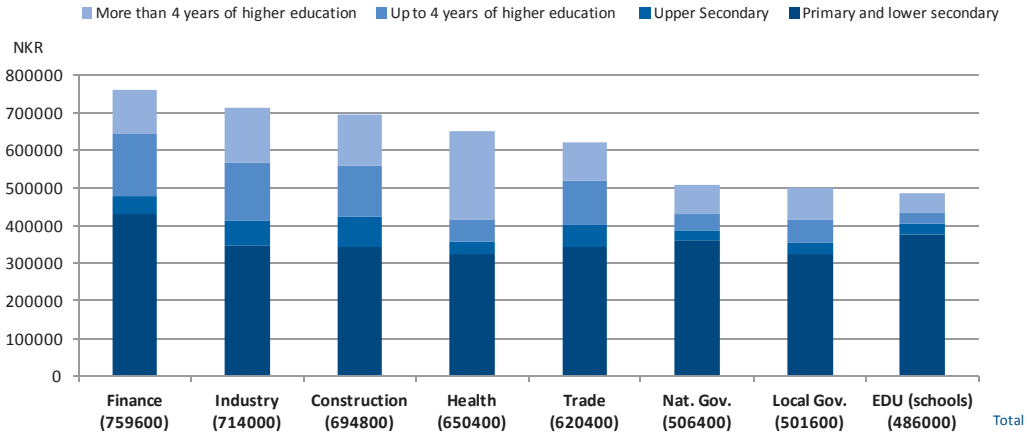
Source: OECD (2010c),*Education at a Glance 2010: OECD Indicators*, OECD, Paris.

Nevertheless, the idea that teaching is perceived as unattractive work was repeated by informants at all levels with whom the OECD-Norway Steering Group spoke. As evidence, it is difficult to attract a sufficient pool of talented new candidates into the profession or to retain them once hired. Comparing data from 2007 and 2008, it appears that 25% of teachers leave profession at age 62, when they can take early retirement. And a recent survey done by the teacher union shows that 17% of teachers intend to work until they are 67 years old (Fafo, 2010).

Beyond the portrayal of teaching as arduous rather than exciting and rewarding lie financial issues for university students considering entering teaching. Teachers' salaries are lower than other comparable professions in Norway, as shown in Figure 3.5, and opportunities for advancement on the salary scale are limited. A teacher with 15 years of experience earns at most only 24% more than a beginning teacher. This is about three times less than the OECD average (Figure 3.6). At the same time, salaries for lower secondary education teachers have not changed much between 1996 and 2008 and are low in relation to GDP per capita. The reasons for teachers leaving the profession given

in surveys point mainly to declining working conditions, low salaries compared to other professions, and low status.

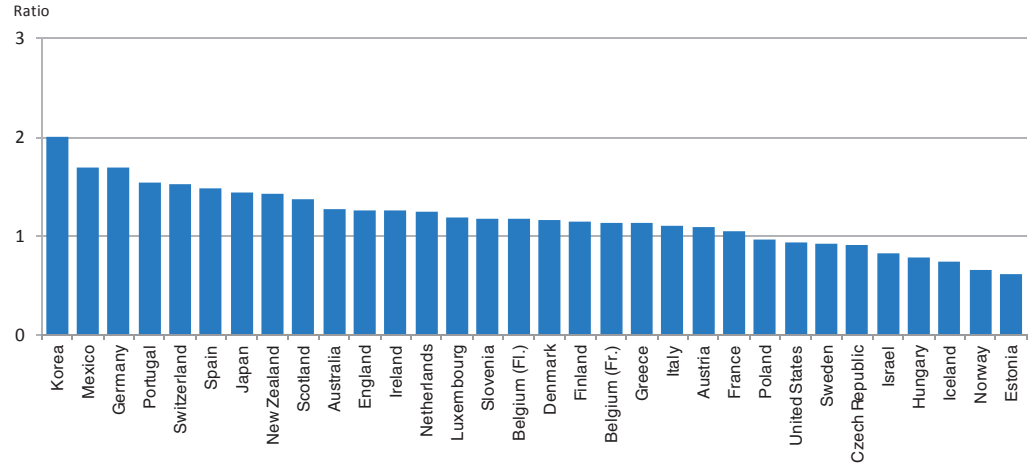
Figure 3.5. Comparison of salaries of different professions in Norway, 2010



Source: SSB and TBU (Norwegian Technical Calculation Committee for Wage Settlements).

Figure 3.6. Evolution of teacher salaries, OECD countries 2010

Salaries after 15 years experience and training in relation to GDP per capita across OECD countries



Source: OECD (2010c), *Education at a Glance 2010: OECD Indicators*, OECD, Paris.

Career mobility opportunities seem scarce and may be focused on either becoming a principal, supervision or coaching of starting teachers. Given the rich resources devoted

to education, that teachers are not well compensated is surprising, and acts to reinforce their low status and value to society.

Many lower secondary teachers teach in small schools in Norway that combine primary and lower secondary education (Figure 2.5). All together, one-third of teachers teach in such schools, many of which are small and serve isolated rural populations. Such combined schools often have teachers who are generalists and teach both primary and lower secondary education students.

Teachers with a general level of disciplinary knowledge can succeed in primary schools but their knowledge gaps become problematic when teaching young adolescents. Different studies have shown that many Norwegian teachers lack the needed competence in the subjects they teach in lower secondary schools, with students also expressing dissatisfaction on the levels of knowledge of their teachers.

This situation has been recognised by the Ministry and the Directorate and it should change after the introduction of the new Norwegian teacher education programmes, which have been separated into one programme preparing teachers to teach years one to seven and another programme for teaching years five to ten. Teachers taking the second programme in particular should be more prepared to respond to the specific needs of lower secondary education in combined schools (Box 3.2). Targeted research should accompany the implementation of the new teacher education programmes to ascertain whether they are having the desired impact.

A comparative perspective on the conditions of teaching provides an overview of how Norwegian teachers feel about their schools, students and their jobs. TALIS reports teachers' self perceptions on professional development, leadership, teaching practices and beliefs, and appraisal and feedback to teachers. Norwegian teachers have perceptions of their self-efficacy and job satisfaction above the TALIS average and above all other countries, as shown in Chapter 2. A majority of teachers have a very positive view of teacher-student relations, far more than in other countries. Nonetheless, teachers have a negative view of the disciplinary climate, and nearly 40% of teachers (compared to a TALIS average of 26%) are in schools where the principal reports that teacher absenteeism is hindering instruction a lot or to some extent.

Teacher evaluation and professional development

To support teachers to improve their practices, schools or education systems across OECD countries have recently been focusing on strengthening teacher evaluation mechanisms. Fair and effective teacher evaluations can provide crucial information for improvement and additional support and can also function as a quality assurance mechanism that provides a picture of current performance levels (Isore, 2009). According to TALIS data, 16% of teachers in Norway had not received feedback or appraisal in their school and almost 17% of teachers were in schools that had no evaluation (external or self-evaluation) in the last five years. Of those teachers receiving appraisal/feedback, only 25% reported that it resulted in a development plan to improve their teaching. This percentage is low compared with the TALIS average of 37%. Strengthening teacher evaluation mechanisms could help improve teacher quality across Norway.

There are few incentives for improved performance: in Norway only around 18% of teachers report that they will receive some reward (monetary or non-monetary) for being innovative in their teaching, among the lowest percentages of the 23 countries. On the other hand, only 11% believe that poorly performing teachers will be dismissed, thereby indicating that among teachers themselves there is doubt that rigorous professional standards are upheld in Norwegian schools.

Teacher evaluation is only one part of the improvement equation, as it needs to go hand in hand with professional development and support for teachers. Professional development is needed to support teachers and their changing needs throughout their careers, as well as to support teachers when there are changes, new reforms or initiatives (OECD, 2010a).

According to TALIS, almost 87% of Norwegian teachers participated in professional development activities in the 18 months prior to the survey period, which is very similar to the TALIS average of 89%, but the average number of days of development taken by Norwegian teachers was 9.2 days, well below the TALIS average of 15.3 days. In addition, TALIS confirms what the OECD-Norway Steering Group heard from teachers: that most professional development consists of informal exchange between teachers, and that there is considerable demand for more systematic, school based professional development designed to meet specific teacher needs such as dealing with students with special needs or improving instructional practices and methods of assessing student progress. The team was also told of the need for stronger support for lower school science and math teaching; training in the use of ICT to modify and diversify instruction; and for engaging adolescent boys in reading.

A national strategy for training in-service teachers supports teachers throughout their careers and it is flexible to respond to perceived needs. The Competence for Quality policy for in-service or professional development follows from the Competence Development Strategy in Basic Education 2005-08, which was a collaborative effort to build teacher competence in which the Association of Local and Regional Authorities, the Union of Education, the Association of Graduate Teachers, the Union of School Employees, the Association of School Leaders and the central administration all participated. The focus for 2009-12 was on Mathematics, Norwegian, Sami and English for lower secondary education. The present priorities are on strengthening subject knowledge, teaching skills, quality of studies and research orientation. It includes features such as mentoring for new teachers, new paths to enter the teaching profession, centres for teaching excellence, pedagogy and pupil-related skills. The government covers the cost of developing courses provided by universities and university colleges and in addition 40% of cost for replacement teachers. The rest of replacement cost is shared. With lead responsibility for professional development, municipalities cover the other 40% of the cost (as well as travel related) and teachers pay only 20%.

All countries across OECD provide training and professional development options to their teachers. Evidence points to different options that have impact on teaching practice. First, more and more research has shown that traditional in-service training organised through seminars and courses often has a limited impact on the quality of education (Feiman-Nemser, 2001; Schwille and Dembélé, 2007 in Musset, 2009).

Evidence points to the higher impact of training when it is located closer to the needs of the schools. "The effect of professional development on practice and performance is inverse to the square of its distance from the classroom" (Richard Elmore in Pont, Nusche and Hopkins, 2008). Indications point to school based professional development as more efficient to improve teaching than traditional in-service courses (OECD, 2009; Villegas-Reimers, 2003).

One of these options that deliver good results for teachers is to enable teachers to learn from one another through professional learning communities (PLCs) with their colleagues. Successful PLC provide teachers with activity settings in which they can share problems they are facing in their teaching with their colleagues and assist one another to improve pupil learning. Professional learning communities seem to be underdeveloped in Norway (Klette and Smeby, 2011). Researchers have noted that although there are high levels of teacher collegiality in Norway, teachers rarely collaborate around improving the technical core of teaching, learning, and assessment. Teachers comment on surveys that excessive time is spent on school-wide meetings in which they receive information and little time is spent in focused conversations on improving instruction.

For Norway, given that there is already an important provision of training and support from the national level and municipalities, the challenge is to find the right approach to teacher evaluation suited the Norwegian context, and to ensure that professional development is aligned with school and classroom needs and delivered in the most suitable way to ensure impact.

Clarifying the roles of teachers

Teaching practices have changed greatly in recent years. The roles of teachers have shifted from deliverers of content knowledge to facilitators of the learning process. Learning professionals bring "value-added" with their expertise and the appropriate design and engineering of learning situations. Young people do not bring the motivation for unguided discovery, and it is the teachers that have to make the link with motivation. They have to ensure a personalised learning environment and support all the students in the classroom, as well as assess students and provide individual support (Dumont, Istance and Benavides, 2010).

In this new environment, many countries have started to provide frameworks to show what is considered to be a good teacher or good teaching practices. These frameworks translate into standards, a set of definitions that present a common meaning and shared values of what is a good teacher. They provide a basis for professionals to support student learning and contribute to clarify the focus of teacher education and professional development. Standards may be especially helpful in decentralised environments, to provide common frameworks and especially a vision of what teachers should be aiming towards (OECD, 2010a).

During the review visit, the OECD-Norway Steering Group met many individuals who were unaware of, or could not define what accepted standards of teaching excellence are in Norway. This implies the absence of transparent norms and a certain degree of

individual teaching practice without regular and sustained observations and evaluations by colleagues, which has characterised teaching in Norway, as in many other countries.

Standards of a sort do exist, for example in the aims section of the National Curriculum, but these seem to be viewed as suggestive and not binding for teachers. The *White Paper on Teacher Education* sets out the fundamental areas of competence essential for all teachers. While it is not clear that these areas of competence operate in the same way that standards do in other OECD jurisdictions, they provide a point of departure for conceptualizing standards as an anchor in Norway's educational system. The areas of competence are as follows:

- Competence in school subjects and in how subjects may contribute to the learning of basic skills;
- Understanding the school's purpose and its significance to society at large;
- Ethical awareness in line with the school's value base;
- Educational theory and subject didactics, i.e. insight into how children and young people learn, and the ability to plan, deliver and assess instruction to promote pupil learning;
- Authority and skills in guiding learning processes in a diverse, complex group of pupils;
- Ability to cooperate and communicate with pupils, parents, colleagues and other partners inside and outside the school; and
- Change and development skills and the ability to reflect critically on their own and the school's practice.

These areas of competence are important and indicate steps in the right direction in terms of clarifying and assessing teachers' roles and responsibilities.

Emerging research on teacher effectiveness is resulting in more and more countries developing common teaching profiles and standards. When well developed and explained to teachers, such profiles and standards play an important role in helping teachers to understand what is meant by good teaching from the standpoint of the Ministry. Standards can provide a valuable resource for teacher educators as well, who can use them to help teacher candidates to understand the role of student evaluation and professional development in the cultures of schools. Many standards share a focus on what teachers know and do, and this shows a trend towards changing requirements for teacher certification from inputs, such as courses and credits, to output, such as knowledge and skills. Examples of these standards can be found in England, the United States, Scotland or Ontario. In some countries, standards have been developed by organisations representing the teaching profession or by professional non profit organisations, as it the case of the National Board in the United States presented in Box 3.4.

Box 3.4. National Board for Professional Teaching Standards in the United States

The National Board for Professional Teaching Standards (NBPTS) is a non-profit organisation which aims to recognise and reward highly accomplished educators who meet high and rigorous standards. It develops and maintains advanced standards and offers a national, voluntary assessment called the National Board Certification based on the NBPTS Standards. NBPTS publishes standards of "accomplished teaching" for 25 subject areas and developmental levels for pre-K through 12th grade, including early adolescence (ages 11-15). These are based on the Five Core Propositions, which are considered the foundation for what all accomplished teachers should know and be able to do.

The standards were developed and validated by representative councils of master teachers, disciplinary organisations and other education experts. Teachers volunteer to become "Board certified," and undergo a rigorous year-long process of compiling a multimedia teaching portfolio that is used to evaluate pedagogy and student outcomes. The process also includes a three-hour assessment examination. Once certified, these teachers serve as leaders and model excellence in practice in their schools By the end of 2010, there were more than 91 000 of National Board Certified Teachers in the United States.

Research has reviewed the impact of National Board Certification on student performance, the quality of teaching, and the influence on teacher retention. Most research is positive. In 2008, the United States National Research Council published a report stating that "Students taught by NBPTS-certified teachers make greater gains on achievement tests than students taught by teachers who are not board-certified."

Source: http://www.nbpts.org/

England has professional standards that clarify the role of effective teachers. These professional standards show what are teachers professional attributes, professional knowledge and understanding and professional skills. They provide clarity of expectations at each career stage. Both teacher and school principal standards are frameworks in England that explain what these are expected to do at different career stages. The stages considered for teachers are: qualified teacher status, main scale teachers that have completed their induction, post-threshold teachers on the upper pay scale, excellent teachers and advanced scale teachers. Each set of standards builds on the previous set, so that a teacher being considered for the next stage has already met the standards at the previous stage. As for school principals, standards "assist in the recruitment of head teachers and in performance management processes. They provide guidance to all school stakeholders in what should be expected from the role of the principal and are also used to identify threshold levels of performance" (Department for Education and Skills, 2004; OECD, 2010a).

In Scotland, the General Teacher Council is in charge of the teaching standards and defining entry requirements and approval of initial teacher education and of continuing professional training. This institution will become independent in 2011, with the view of being a self-regulating and profession led body that can guide standards.

In conclusion

There is an urgent need to insist on actions to upgrade the profession at the level of entry and thereby raise the status of the profession. Insufficient young Norwegians are attracted into the teaching profession. Teaching is seen as demanding work that receives insufficient pay and status and teachers could have more impact in raising the academic achievement of their students. The analysis shows that the different components for improvement exist, including high levels of professional development, evaluation, and new initial teacher education programmes, but these need to be targeted and enhanced.

How to raise the status of teaching and improve teacher performance through better initial and continuing teacher education standards and incentives.

Recommended action steps

1. Strengthen the profession by building up teacher's skills in content, adolescent development and teaching strategies, raising the initial education level to a master's degree and linking it to incentives for quality people to enter the profession.

Rather than simply increasing the number of course offerings for teachers, the focus needs to be on strengthening their academic content knowledge so that their instruction is relevant to their pupils. Mastering their disciplinary knowledge, and relating it to graduate course work in adolescent psychology, could help to fortify the professional knowledge base of teachers and raise the status of the profession. This implies that lower secondary teachers should be required to have the new five to ten or eight to13 teacher education programme, as the new one to ten teacher education requirements may not be rigorous and targeted enough for lower secondary teachers

At the same time, it is important that initial teacher education gives teachers a broad set of skills and dispositions to ensure that lower secondary education teachers have the right combination of theory and strategies to be effective teachers. This means that initial teacher education needs to combine rigorous preparation in academic content areas with knowledge of adolescent psychology, student assessment for learning and teaching strategies built into professional coursework at the masters' degree level. The Finnish model of initial teacher education can provide a relevant example for Norway.

It is also important to ensure that the right candidates apply to become teachers, and to signal that the teaching profession is a high quality one. Ensuring that teachers have a Master's degree can fulfil not only the need for stronger content knowledge and teaching, but also the need to signal the value of teacher to society in general. Given the relative low salary in relation to other professions, a possibility could be to establish clear incentives by linking salary increases to having a Master's level for lower secondary teachers.

More specifically, the suggested approach could be to ensure that the basic qualification for teaching in primary and secondary is a Master's degree, following the Bologna process and ECTS, to be two-tier programmes. The main structure could be based on (a) a research-based academic degree where grade one to six or seven teachers would specialise in educational sciences (education, pedagogy, or similar) and lower

secondary teachers would major in the subjects they teach; (b) master's degrees should be academically equivalent to any other similar level degrees in other faculties; and potentially, (c) support or incentives for inservice teachers to take up the masters could be envisaged.

2. Enhance teachers' skills to implement the knowledge promotion curriculum in lower secondary a) requiring participation in continuing education and professional development to update pedagogical and content knowledge and b) providing them with a set of concrete teaching strategies, especially in mathematics and science, that gives them options to respond to different needs.

Norway now has the capacity to assist in-service teachers to develop the technical core of their everyday classroom repertoires in ways that will improve student learning. Several aspects of this technical core can be developed through the provision of school based in-service training for teachers and school leaders. At the heart of the professional development offered should lay support in those areas in which lower secondary education teachers seem weakest:

- Teaching teachers the academic content that is the new curriculum of Knowledge Promotion, and doing so in such a way that teachers develop confidence and skill in teaching that curriculum to their pupils; Teachers especially seem to need assistance integrating practical activities into their teaching and cooperative learning, for students, especially adolescent ones, indicate that these kinds of hands-on experiences enable them to experience school in new ways and raise their level of engagement.

- Raising the quality of teaching of mathematics and science in primary and lower secondary schools. This could be done by designing and launching a national campaign, in collaboration with universities and business leaders to include nation-wide professional development for teachers in all schools, material development and new partnerships with employers and industries.

- Focusing teachers in developing a repertoire of student centred creative practices for learning so that pupils experience variety and novelty and make them more engaged with school as they gradually master the curriculum.

- Developing skills in formative assessment and assessment for learning (this is covered further in Recommendation 4, on student pathways).

The OECD-Norway Steering Group recommends that the Ministry develop a blended model of professional development that combines a) offerings from higher education faculty, b) technical assistance by selected lead teachers who work directly with teachers in their classrooms, and c) further assistance from head teachers who can link teaching quality with the signature profile of a given school. Teacher unions and professional associations play strong roles in high-achieving education systems (such as Alberta, Canada and Finland) and their capacity should be developed in relation to in-service training. The prior experience with collaboration across sectors that characterised the Strategic Plan for Competence Development can be drawn upon here. Supporting the

development of professional learning communities can also help to foster the dissemination of knowledge in a lateral way.

At the same time, professional development needs to strengthen the capacity of teachers to teach this special age group by providing a set of teaching strategies that can respond to the specific age group to ensure that they can use the flexibility entailed in Knowledge Promotion. The professional freedom that teachers can enjoy will be an important tool for recruiting new teachers into the profession and for raising its status. To this end:

- ICT may play an important role as younger generations possess a greater capacity to innovate and produce new kinds of programmes customised for their personal and professional needs. Particularly appropriate for lower secondary students in this regard are mini-courses and projects based on student interests and activities that allow them both to explore new topics and to be able to experience how adults think when they have deep learning or mastery of a topic.

- Legislation does enable the school owner to predispose of 25% of the lessons in each subject for individual pupils when there is reason to believe that it could lead to better learning outcome for the pupils. This requires consent from the individual pupils and their parents. Teachers who are trained in ICT and who can help students to explore topics of particular importance to them may be able to use this freedom to show reluctant students new ways to engage academic content knowledge. Students may find new ways to relate to school if they are given these opportunities.

3. Define what an effective lower secondary teacher in Norway is, using clear professional expectations or standards for teachers, and ensure that teachers receive regular feedback and evaluation on meeting those standards.

Developing a clear vision of what a good teacher in Norway does and what are the expectations of teachers are can greatly contribute to improve teacher performance. This would be especially valuable in the current decentralised arrangements to provide more information and guidance to county governors, municipality leaders, principals and teachers.

At present, in the absence of a clear set of teacher standards, county governors and municipalities are compelled to rely on word of mouth modes of gathering evidence about teacher and teaching quality. If Norway is to maintain its decentralised educational governance model in the future, support is recommended to help Governors and municipalities to be effective in fulfilling their responsibilities in relationship to quality development, as suggested in Recommendation 1. The national assessment model has a special role to play here in assisting County Governors and municipalities to understand their pupil outcomes and to make informed judgements about ensuring teacher standards and achieving learning standards.

It should not be necessary to develop new standards, but rather to start by using those that have been developed already and refine them. Efforts maybe should go then in

the direction of: a) streamlining: establishing a single set of standards, instead of having several floating around the system; b) that these become indeed in practice the central reference to all actors about what is expected from teachers.

Collaborative discussions to ensure that these are well developed would require participation by the Ministry, professional associations, teachers, school leaders and students, as well as school owners. An example of the process that could be followed is presented here:

1. Set up consultation mechanisms. Set up a mechanism at the Directorate that ensures consistency between the national curriculum and a preliminary set of standards that will be submitted to stakeholders' views. This can be done through a collegiate body of key social and academic actors that will determine:
    - How the consultation will be made
    - What preliminary set of standards could be submitted
    - How to follow up on the process beyond initial agreed versions
2. Develop a strategy for national consultation. This will allow actors at different levels participate to shape further the standards proposals, according to their context. More importantly, this process will generate knowledge and ownership across the country.
3. Ensure appropriate feedback mechanisms. Once agreed, ensure that standards can have periodical revisions, that these remain aligned among themselves and that any new initiatives, programmes and reforms take these documents as starting points (OECD, 2010a).

R3. Promote school improvement

Recommendation 3: Ensure that every school has the capacity and is effective to meet the learning requirements of all its lower secondary students.

Lack of motivation in lower secondary education is a key issue

Lower secondary education in Norway faces major challenges. Students arriving into this level of education may have some deficiencies in basic skills, and also leave with skills too weak to go into upper secondary education. There appears to be a positive learning environment in schools, with a good school and classroom climate, good student-teacher relations and students happy to be in schools. However, many students appear to be unmotivated or not challenged enough, rendering their learning less effective than it could be. Chapter 2 shows that student motivation has more impact on performance in Norway than in other countries, and this motivation decreases as students

get older, according to the Norwegian national pupils' survey. This is a particular challenge for Norway's lower secondary schools.

As discussed in the previous section, one reason for the lack of student motivation may be the lack of content knowledge among teachers at this level. Measures have been taken to improve lower secondary teacher knowledge and skills with the recent initial teacher education reform that provides more subject specialisation to lower secondary education teachers. Reshaping the curriculum with the Knowledge Promotion has also aimed at developing more relevant content for students at these ages. Yet, for teachers to teach well and students to be engaged and learn, schools need to be effective in delivering education, as they are the main institutions were learning takes place.

Lower secondary educators and policy makers appear to believe that students are not motivated and drop out is high because schools are too theoretical and that more practical learning should be implemented at this level. Around 69% of students graduate from upper secondary education, a level at the high end of OECD countries, so while Norway may rightly aspire to keeping all students in school through upper secondary, drop out levels appears to be less of a problem than achievement. Motivation and the sense that education received is relevant can be a strong driver for performance. As shown in PISA 2009, in every country, students who enjoy reading the most tended to perform significantly better than those who enjoy reading the least (OECD, 2010e).

The Norwegian Pupil Survey shows that student motivation decreases as they become older, starting between grades five and ten just when engaging academic challenges should be increasing. Many find a lack of alignment between the objectives in the Knowledge Promotion which does require intellectually challenging curriculum and the degree of challenge actually in place in schools. Students appear not to recognise what constitutes excellent achievement, why this is important, and how to improve. PISA 2009 data show that only 55% of students interviewed considered that teachers really listened to what they had to say. This is an improvement compared to 2000, but is still relatively low compared to other OECD countries (OECD, 2010e). Indeed, the challenges of delivering education for 13-to-15-year-olds, the beginning of adolescence raise additional issues that need to be targeted in schools (Box 3.5). Indeed many teachers we met referred to the challenges *and* opportunities that working with youngsters provided.

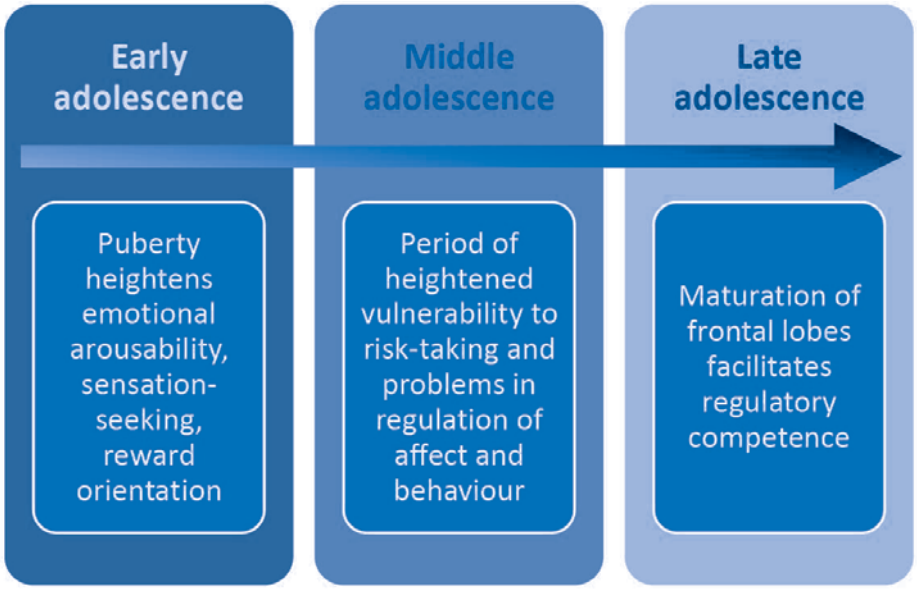
Students in lower secondary education seem to have a more difficult relationship with teachers than in primary education, with decreasing academic enjoyment and motivation, and there are also a number of students that suggest that the physical space in lower secondary education is not as satisfactory as primary or upper secondary education. The lower secondary schools were mainly built in the 1960s and 1970s and may be in need of rehabilitation.

Focusing schools on students and their needs

One way to look at how schools can respond to issues of motivation, intellectual achievement, and engagement is through the broad lens of adolescent development. What do adolescents need from school? Under what conditions do they best engage? There appears to be too little attention in initial teacher education and in professional development to these issues and their implications for how schools should be organised

and led. Research consistently characterises adolescence as a period in which young people are looking for answers that are relevant to their lives whether practical *or* theoretical. Indeed, adolescence is a period in which young people are eager to engage in theoretical questions about death, war, peace, poverty, and the like. In addition, unresolved issues about identity, gender, sexual orientation, peer and family relations can affect students' schoolwork. Adolescence is also a time for testing and risk-taking behaviour, and teachers need to understand the relationship between the emotions of puberty, cognitive development, and behaviour in social settings such as schools (Figure 3.7).

Figure 3.7. Adolescent development issues



Source: Figure taken from: Steinberg, L. (2005), "Cognitive and Affective Development in Adolescence", in TRENDS in Cognitive Sciences, Vol. 9, No. 2, Elsevier.

In an overview of research on cognitive and affective development in adolescence, Lawrence Steinberg, an authority on the topic, states that "New perspectives on adolescent cognition-in-context emphasise that adolescent thinking in the real world is a function of social and emotional, as well as cognitive, processes, and that a full account of the ways in which the intellectual changes of adolescence affect social and emotional development must examine the ways in which affect and cognition interact." He concludes that these developments reinforce the emerging understanding of adolescence as a critical or sensitive period for a reorganisation of regulatory systems, a reorganisation that is fraught with both risks and opportunities (Steinberg, 2005).

Chapter 1 presents selected evidence on strategies that work to strengthen motivation in school for this particular age group. Different strategies including effective classroom management, participation in extracurricular activities, strengthening personal relationships with teachers and the availability of counselling and guidance services are associated with adolescents feeling cared for by adults in their schools and feel like a part of their school (McNeely, Nonnemaker and Blum, 2002; Watts and Fretwell, 2004). Box

3.5 presents an example of a curricular supplement programme to support student learning for this age group.

Box 3.5. AVID, a curricular supplement

The AVID (Advancement Via Individual Determination) was established in a California high school in 1980 by two English teachers. It was designed to improve the academic outcomes for the large number of students in the middle. Research has shown that well-behaved students with average grades from low-income families tend to receive the least attention from teachers and school counselors, and enroll in less demanding courses. A research-based system that includes teacher professional development and the use of college students as tutors, AVID accelerates student learning, uses research based methods of effective instruction, provides meaningful and motivational professional development, and acts as a catalyst for systemic reform and change.

Students are enrolled in their school's most difficult classes and in the AVID elective which is based on writing, inquiry, collaboration, and reading. Led by a teacher who has been trained in the programme's methodologies, for one period a day students learn organisational and study skills, work on critical thinking and asking probing questions, get academic help from peers and college tutors, and participate in enrichment and motivational activities that make further education seem attainable. Their self-images improve, and they become academically successful leaders and role models for other students. AVID is at work in nearly 4 500 schools in 47 states and 16 countries/territories.

Source: http://www.avid.org/

In addition to focusing on adolescent psychology, focusing on placing the child at the centre of education is a key issue (student centred learning). Student-centred learning builds upon where students spend most of their time and energy and situate in the broader context of what we know about how young people learn, the factors that foster learning, those that hinder it and how to change the learning environment and content in order to help the student acquire the necessary skills (for example, becoming meta-cognitive, self knowing and self assessing learners).

Box 3.6 provides an example of a recent effort in the United States to start working on student centred learning. As pointed out by this project, student centred learning can be used as a working frame to better assess where are the failures in the system, and to make operational changes that will help improve student engagement overall.

Box 3.6. The Project *Building the Knowledge Base for Student-Centered Learning*

This project considers student-centred learning as an approach that customises education to ensure that each student acquires the common set of skills, knowledge, and deep expertise needed for 21st century college and career success. The ultimate goal of building the knowledge base is to uncover which of the many practices that fall within student-centred learning get the most payoff at the largest scale and what are the major opportunities for and barriers to transforming the current system. As a working definition, an initial set of principles of student-centred learning is provided below that will evolve throughout the project:

1. ***Result in the knowledge and skills necessary for all students to attain postsecondary education and career readiness in the 21stcentury***
   a. Address needs and interests of each learner while meeting rigorous learning standards.
   b. Include the development and assessment of cognitive and non-cognitive skills.
   c. Award credits for mastering transferable learning objectives between school systems and into higher education.

2. ***Align with current research on how people learn***
   a. Locate learning in the context of students' differing prior knowledge and experiences and employ research about adolescent social and brain development to address different learning gaps.
   b. Build educators' abilities to be strong facilitators and coaches, in order to engage all learners.
   c. Transfer greater responsibility for learning to students; supporting their development of metacognitive skills, capacity to set and understand learning targets, and ability to receive feedback.
   d. Empower and support school, family community actors to engage learners to tackle challenges, take intellectual risks, and work to a high level of mastery.

3. ***Focus on mastery of knowledge and skills***
   a. Capitalise on opportunities for learners to gain skills and knowledge outside the school.
   b. Move toward a system where individual progress and broader accountability is based on demonstration of mastery rather than seat time or a prescribed calendar.
   c. Assess students' skills and knowledge using a combination of approaches suited to the content being assessed, including performance-based approaches and traditional testing.
   d. Develop ongoing formative assessment to keep individual students moving quickly along a path to mastery.
   e. Provide data management systems that support learning so that all school and social actors can identify in "real time" where both teachers and students are competent and where they are having difficulty.

4. ***Close existing gaps and provide equitable access to achieving a high-quality education, especially for underserved youth***
   a. Focus efforts on and engage key family, service, community, and business partners in a "whole child approach" to address the needs of underserved learners and close achievement gaps.
   b. Use data to improve programming by analyzing ongoing information on student access, opportunity, achievement, and attainment of learning outcomes.
   c. Ensure funding formulas and resource allocation provide the scope and quality of learning opportunities and concomitant supports for those students who most need them.

Source: Extracted from Jobs for the Future, 2011, "Building the Knowledge Base for Student-Centered Learning", Unpublished concept paper, JFF, Boston.

School leadership in lower secondary schools

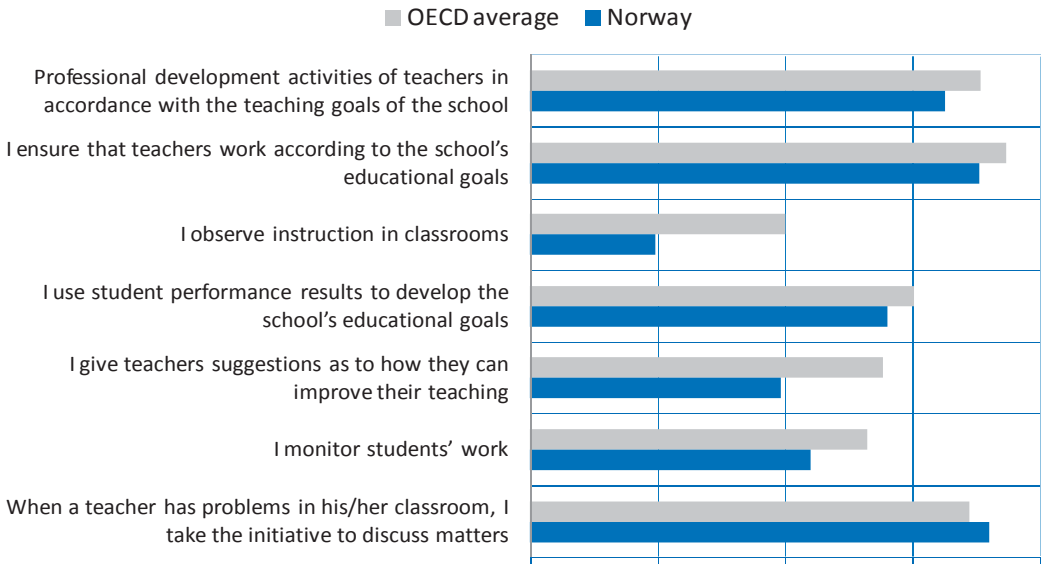
According to PISA 2009, Norwegian schools have above average autonomy in selecting teachers, formulating and deciding on school budget allocations within the schools. They have less autonomy, and more engagement with regional or national education authorities when it comes to curricular and assessment policies. Still, it appears that teachers and school leaders receive support from municipalities in financial and administrative matters, but that there is less capacity on learning, subjects and pedagogy and on how resources may improve learning outcomes of students (PWC, 2009; Hegtun and Ottesen, 2007).

Norwegian primary and lower secondary schools operate in a decentralised environment. But the quality of governance and support for schools by municipalities varies widely depending on their size and organisational structure. The capacity of municipalities to support schools is clearly important, especially when school leadership is not strongly developed. Smaller municipalities have fewer opportunities to provide support because of fewer resources. While data from Norway shows variable performance results at the national level for students depending on the size and compositions of municipalities, the Norwegian schools display a relatively consistent level of performance across schools more so than most of the OECD countries, and most of the variation is rather within schools rather than across schools (Figure 2.8 in Chapter 2). The question is whether there is a variable capacity to guide and support schools, or rather that school leaders and teachers in general are not well prepared to challenge students intellectually, taking into account adolescents' developmental needs in lower secondary education. In this decentralised environment, in which schools work alone or receive variable support depending on the municipalities, effective schools are a prerequisite.

Studies have shown that there are clear characteristics that drive high performing schools. Effective schools have strong leadership, and they concentrate their efforts on teaching and learning, monitor performance and respond to accountability, and also develop a relationship with the pupils and the parents by strengthening feedback, ensuring students respond to their rights and responsibilities and that there is parental engagement in their children's education (Sammons *et al.*, 2005).

School principals in Norway have tended to focus on administration and management, rather than on instruction to support learning and improvement. According to 2009 PISA results, school leaders involvement in different aspects of schooling shows that Norway's lower secondary education principals score below average in areas that reflect instructional leadership: less than one quarter observe instruction in classrooms, and less than half engage with teachers on how they can improve their teaching, or check to see whether classroom activities are in keeping with educational goals. In terms of instructional leadership, they rather concentrate on solving classroom problems or behaviour, and informing teachers about professional development (Figure 3.8).

Figure 3.8. School principals' reports of their roles in school, PISA 2009



Source: OECD (2010e), *PISA 2009 Results, Learning to Learn,* Vol. 3, OECD, Paris..

Until recently, school leaders in Norway have played mainly an administrative role. As a result, they often lack the skills and knowledge required to create the vibrant learning environments that should exist given Norway's rich resources and deep public commitment to education. Even with their emphasis on management in their roles, the knowledge base of school leaders appears to be weak. In 2010, a survey of school leaders found that 30% of them had no formal education in management or organisational skills.

Historically, central government did not require school leaders to receive formal education in instructional leadership or school management, and this was left to the municipalities' responsibility. To address this knowledge gap the most recent initiatives, such as the White Paper on *Quality in Education* (2007-08) has the goal of fostering the instructional role of the school leader, and increasing accountability from municipalities relative to what happens in their schools. At the same time, there are requirements for school leaders now to have the pedagogical competence and leadership skills to lead the pedagogical process, such as the Education Act and the new Knowledge Promotion.

In addition, a new school leadership training programme has been launched in 2009 to develop the needed instructional leadership skills for Norwegian directors. The two-year programme covers six key competence areas including 1) students` learning outcomes and environment; 2) management and administration; 3) collaboration and organisation; 4) guidance of teachers; 5) development and change, and; 6) relationship to the role as a leader and development of leader identity. For its first years, the programme is focusing on new school principals, with fewer than two years of experience (401 participants in the past round in courses provided at six institutions) but participation will

be broadened to include more experienced school leaders. The impact of this programme will take some time to be felt throughout schools.

The analysis of the evidence, data, and interviews with ministry officials, school owners, leaders, teachers, students and parents in Norway, have brought to light the challenges related to lower secondary schools in Norway: how to ensure that individual schools provide quality lower secondary education taking into consideration the current context of decentralisation, low student motivation, variations in capacity and support, and a prevalence of administrative leadership across schools in Norway. Targeting schools and school leadership can contribute to strengthen lower secondary education outcomes.

Supporting school improvement

The preconditions for improving the effectiveness of schools as organisations exist in Norway. Not only are there relevant reforms underway, but Norwegians students have a high level of well-being, are committed to collaborative decision-making, and have good relationships with their teachers. Surveys show that students feel that free expression is welcomed in school. In addition, unlike countries without a strong social safety net, Norwegian students come to school without worries about health care, housing, and costs of further education, so they should be ready to study and to work creatively to their potential. That policy-makers, teachers, school and municipal leaders complain about the decline in motivation to engage in learning as student reach adolescence suggests that something is missing in the educational strategy since the pre-conditions for learning in school exist.

Schools need to consolidate their capacity to be effective and focus on improving results. At present, schools are rather autonomous, but school leaders play a more administrative role, with only a quarter of teachers receiving appraisal/feedback resulting in a development plan to improve their teaching (TALIS). Accountability and evaluation is in the process of being introduced, feedback is an issue that has been highlighted as needing strengthening, and there is a need to engage parents more in their children's education.

For decentralisation to work appropriately, it is important that there is an appropriate balance between local autonomy and central direction for schools, as reviewed in Recommendation 1. The capacity of teachers, school leaders and municipality officials to run and sustain school improvement needs to be enhanced, and a number of reforms have been passed in recent years to target these issues. But to ensure system improvement across schools, a more targeted national school improvement strategy can help balance the equation.

There are different ways to approach school improvement. Improvement can be seen as increases in quality and performance over time (as cited by Richard Elmore in Hopkins, 2007) and school improvement strategies look at ways to systematically improve the learning of students in schools by providing the appropriate support. Box 3.7 presents an overview of the different theoretical strands of work focusing on school success strategies.

Box 3.7. School improvement and school effectiveness research

In terms of the research literature, a strand which focuses on individual schools and draws upon primarily qualitative study methods has emphasised **school improvement** as the metric for analysis (Hopkins, 2001; Reynolds, 2010) Its focus has been on the need for each individual school community to mediate policy carefully and appropriately for its own given context. Researchers (Cohen, 1990; McLaughlin, 2008; Spillane *et al.*, 2002) have found that externally mandated or prescribed policies are often misunderstood or opposed by local actors so that their potential is limited. Some (Hargreaves & Shirley, 2009; MacDonald & Shirley, 2009) have found that at least partial opposition to reform is often warranted as even the best designed policies have limited ability to improve schools given all of the variation that occurs in local school sites and especially in increasingly multicultural and multilingual communities.

A second research strand that has evolved since the late 1980s has emerged under the designation of **school effectiveness** (Teddlie, 2010; Townsend, 2007). This research tradition has revealed a set of institutional characteristics of high-achieving schools and systems. Here the emphasis is on system and school level alignment with an aspiration for reforms that are mutually reinforcing and that are trustworthy in their efficacy regardless of local diversity and history. Unlike the school improvement tradition, the school effectiveness approach typically has emphasised the formal organisation of schools into systems and favoured quantitative over qualitative methods. Effective schools researchers have documented ways in which schools matter and urge educators to acknowledge that whatever the impact of socioeconomic background on pupil learning, rigorous empirical research (Teddlie & Stringfield, 1993) shows that schools do not simply reflect but independently shape student learning outcomes. While the school improvement tradition at times has questioned the reliability and validity of student test score results, scholars in the school effectiveness tradition generally have considered test scores to be accurate and hence have integrated study of test data into all of their research methodologies (Bosker & Witziers, 1996; Brookover *et al.*, 1979; Teddlie, Reynolds, & Sammons, 2000).

There have been different strategies for school improvement across countries in recent years. Strategies may be directed to schools, others beyond the school borders focusing on local school improvement. Recently, many strategies have been designed at the national level. Among the different levers that these strategies focus on are:

- Strengthening school leadership as a key approach to improve school performance. But developing the needed skills to drive school improvement takes time, so parallel support is often required.
- Designing strategies that provide tools to schools to stimulate school improvement. These may be delivered by individuals, by public institutions, by local level government, or be accessed by schools directly searching for these tools, usually through Ministry of Education or agency websites.
- Developing networks for systemic improvement, focused on developing instructional leadership and sharing of best practices.
- Designing strategies that highlight and reward successes of strong schools and school leaders and disseminating this information across the system.

Whole school improvement with the goal of turning schools into learning organisations is a relatively new approach at the Directorate level in Norway. Several key projects of the Directorate, currently underway or recently completed, encourage and incentivise whole school change. For example, the programme for school development, the Knowledge Promotion from Theory into Practice, 2006-10 was a strategy to promote implementation of the Knowledge Promotion reform across entire schools. The project engaged 270 schools, 90 municipalities, and 14 counties with the goal of building school leader and owner capacity to use data, to self assess, to harness the expertise of external partners, and to produce tools and guides to stimulate further improvement. Incentive funds enabled schools to buy services from outside organisations such as universities, now affiliated with the newly created Centres of Knowledge. In addition, schools had advisory teams of experienced educators to assist them. To support the academic improvements desired, the Directorate promulgated additional projects to improve school environments and to strengthen low performing municipalities. The development of assessments is also underway. The Directorate is also developing The Norwegian Quality Assessment Framework (not treated here since it is the subject of a parallel OECD review on evaluation and assessment frameworks).

Each of these is a costly project that engages many players. While the ideas in each are in keeping with research on systemic reform, the outcomes appear to be less than satisfactory. Multiple evaluations of different aspects of the Knowledge Promotion implementation are currently underway; they echo common themes: there is too little guidance for school leaders and teachers from the Ministry and Directorate, and the goals and objectives of the Knowledge Promotion do not seem to be well understood. The OECD-Norway Steering Group heard that teachers whose job it is to develop the local curriculum are not clear as to what to do. A particular weakness in implementation of the Knowledge Promotion reform appears to be in upper secondary vocational schools, thus raising the question of alignment. Even if the Knowledge Promotion is well implemented in lower secondary, there is no assurance that gains will be maintained in the transition to vocational upper secondary school.

Interestingly, the OECD-Norway Steering Group heard little about highlighting and rewarding successes of strong schools and school leaders. Norway would benefit from showcasing schools and school leaders who have met high expectations in lower secondary schooling, codifying their practices, and linking these leaders in peer learning networks with others who might learn from them. Some progress has been already made in these areas, as Norway has recruited school leaders into a group of guidance staff.

Overall, reforms such as Knowledge Promotion, the Strategic Plan for Competence Development, and the new school leader training programme are important milestones in the development of a more systemic professional approach to school improvement. The new change architecture, however, may benefit from further consolidation and streamlining of efforts to be effective.

A strategy adopted by some countries recently is the development of lateral learning networks across schools, to act as levers of change. The Raising Achievement Transforming Learning (RATL) network in the United Kingdom was an example of such a network[3]. RATL created intentional learning communities through specific interventions in previously underachieving schools and improved achievement in two-

thirds of the project schools at double the national rate of growth in a two-year period (Hargreaves and Shirley, 2007). The RATL network helped educators to study student achievement data so principals and teachers could identify specific students struggling in particular topics and develop targeted responses to help them achieve. Educators in distant jurisdictions were brought together through an on-line web portal and also attended regional and national conferences for in-depth conversations with colleagues dealing with similar problems of low pupil attainment. This reform has made important contributions to raising student achievement in specific target subjects and has lifted educators' morale in the process.

The RATL network demonstrated that a professionalised understanding of schools learning from schools could raise achievement results rapidly in participating schools. However, two caveats are of special significance for Norway:

- Participating schools that had principals who enjoyed their autonomy and were passive players in the RATL network did not see achievement gains in their schools. These schools used government resources to continue traditional forms of instruction and simply augmented it with tutorials outside of school. Deeper conversations about teaching and learning, followed up by improvements in instruction, did not occur. In Norway, given Norwegian principals' high levels of autonomy, simply creating a RATL-like network in Norway may not demonstrate gains in pupil learning unless efforts to ensure collaboration with a focus on student learning are harnessed in Norwegian principals.

- Schools in RATL became focused on measurable achievement gains and this focus crowded out other dimensions of education such as fostering civic engagement and citizenship, ethics or the arts, resulting in what some researchers have called "constrained professionalism" (Wills & Sandholtz, 2009). Given the challenge of strengthening student motivation and engagement in Norway, a similar strategy would have to acknowledge this potential distraction and to ensure that students have access to a broad and rich curriculum to improve their engagement.

In Ontario, Canada, another approach was designed to ensure school improvement across the board. To provide support, a special secretariat was created and student success partners were supported across school boards in Ontario, to follow through with individual schools and provide local support (Box 3.8).

Box 3.8. The Ontario School Improvement process

In Ontario, the Ministry provides the guiding principles, policy and support, and the public education system is organised in four locally elected school boards (which reflect constitutional requirements for public support of French language and Catholic minority in Ontario). This structure allows for the boards to respond well to local needs and also to develop a governance approach that allows for schools and regions (school districts or boards) to work together towards common and shared goals.

To improve performance, Ontario developed an initiative called "Energizing Ontario Education" focused on three key priorities for all players in the public education system: 1) High levels of student achievement (75% students achieving provincial standard in grade 6 and reaching 85% graduating rates); 2) reducing the gaps in student achievement; 3) increasing public confidence in publicly funded education. These targets were set in 2004 but have continued for a second mandate in 2008 to ensure sustainability and focus on the core purpose of schooling. This has managed to set a vision that most players in the system have embraced and are working towards, providing clear focus and stability.

To support improvements in attainment they have developed different and complementary support strategies at all levels of the system. They created a new position of *chief student achievement officer*, a *literacy and numeracy secretariat* and added 5 000 new teaching posts to reduce class sizes to 20 students and provide additional support. They have increased public expenditures in education by 24%, destined to expand staff in key areas to support improvement: they have allotted student success teachers in every school district, developed specialists teachers, provided more specialised staff to focus on diverse needs at the local level, that work on schools or school districts.

Ontario has also made leadership and leadership development the focus of their improvement strategies. There has been a clear leadership strategy, focusing on attracting good candidates to the posts and preparing and supporting them to improve the quality of instruction.

Source: OECD (2010a), *Improving schools: Strategies for Action in Mexico*, OECD, Paris

Another initiative is the recently developed reform to encourage school improvement in Australia based on incentives. Australian schools will be eligible to receive up to USD 100 000 if they achieve real improvements in school attendance, literacy and numeracy results from year to year. This Reward for School Improvement programme will provide Australian primary schools with USD 75 000 if they show the most improvement in the areas of school attendance, literacy and numeracy results. To implement these reforms, a comprehensive National School Improvement Framework will be developed to inform the assessment and a new Office of National School Evaluation (ONSE) will be established as an independent unit within the Australian Curriculum and Reporting Authority (ACARA).

England has also had an important history of school improvement support strategies aligned to the definition of policy priorities. A national literacy (1998-2004) and a numeracy (1999-2004) strategy, a primary education and a secondary education strategy and just recently a schools White paper, all contain school improvement architecture for supporting better results. In a decentralised context, in which schools are supported by

local authorities much action has been designed at the local level. School improvement partners have been assigned to local authorities to visit schools and provide the needed support. However, evaluations of the different strategies show the positive and some of the resulting lessons. Often, the rapid introduction of new initiatives, as well as the large number of initiatives resulted in them having less effect or not being able to distinguish the effect of different initiatives on results (Ofsted, 2010). The more recent White Paper on the importance of teaching (Ministry of Edcuation and Research, 2008-09), changes the support architecture to move away from more centralised programmes to transfer the responsibility to schools and provide support that schools can access directly.

Finally, linking schools together can contribute to improving capacity of the education system with common purposes and improvement goals. At the heart of this role is the fact that schools and their leaders are not alone, and that working together they can reach higher levels of practice. A group of jurisdictions has made system leadership part of their school improvement strategies. In Belgium (Fl.), England and Finland (Box 3.9), they have done so by creating possibilities for cooperation that promote going beyond leaders' own schools to support local improvement. These approaches focus on system-wide school improvement by encouraging and developing schools and school leaders to work together. From a study of innovative practices in this area, the researchers found a number of significant benefits emerging. These included development of leadership capacity, rationalising of resources, increased cooperation, leadership being distributed further into schools and across education systems and improving school outcomes (Pont, Nusche and Hopkins, 2008).

Box 3.9. Finland's networks for school improvement

Finland sustains a constant capacity building of educators. More importantly, there is a dynamic and constant alignment across the different levels of the Finnish system to improve education. Finland works through a scheme of redistributed leadership between and within municipalities, but also between and within schools. Through this network, also described as a "local and institutional web of interdependencies", municipal leaders start to depend more on district heads as their success in solving local problems is increasingly influenced by their actions. District heads also increasingly depend on other principal colleagues in their area, as the evaluation of their work is based not only on what they achieve in their own school but also on what the community of schools in their area achieves. Principals start then to consider and to address broader community needs, rather than competitively defending the interests of their own organisation."

This strengthening of mutual interdependencies and interactions in Finland pushes the system towards emergent principles of development and change. As school principals have tasks that are related with the municipality, they do not focus all their time and energy only on their school. They are then obliged to delegate management tasks to other staff. This encourages a greater open lateral leadership within the school. It allows then a stronger development of distributed leadership capacity and therefore a more constructive approach to leadership succession and sustainability across the system.

Source: Hargreaves, A., G. Halasz and B. Pont (2008), "The Finnish Approach to System Leadership," in Pont, B., D. Nusche and D. Hopkins (eds.) (2008), *Improving School Leadership:* Vol. 2 Case Studies in System Leadership, OECD, Paris.

Another relevant approach combining the developing of networks with a school improvement focus is the Alberta Initiative for School Improvement (AISI) in Canada's highest-achieving province (Hargreaves *et al.*, 2009). Teachers in Alberta have high social status and PISA results are high and sustainable because of the professionalisation of teachers. AISI receives 2% of Alberta Education's resources each year to stimulate innovation at the school and district level. Teams of educators design projects based on local needs and conduct research about the impact of their interventions under the guidance and with the assistance of university-based faculty. AISI project recipients must commit to sharing their learning with other schools in Alberta as a requirement to receive funding. Collaboration between the Alberta Teachers Association, Alberta Education (the Ministry of Education), the College of Alberta School Superintendents, and higher education institutions has given AISI enormous support among educators who view it not as a ministerial mandate but as a genuine opportunity for professional leadership and personal growth. In addition, the development of teacher leaders through service on AISI projects has served as a pipeline to recruit teachers into head teacher roles.

Types of networks such as AISI hold special promise for educators in Norway because of the careful way that they calibrate top-down steering from the Ministry, lateral learning from educators in schools across district lines, and bottom-up innovations that enable principals and teachers to identify issues in which they recognise a need for further professional development. Essentially, AISI leaders and Alberta Education have conceptualised Alberta's schools as a single learning organisation, with rich cultural and linguistic diversity, but also with a common purpose of providing the best possible education for the province's children.

The English model of system leadership has explored different options for improvement. This "school partnering" or the "federation approach" has been quite successful. Principals and schools from leading schools partner another school facing difficulties and improve it, either through the executive head of a federation or as the leader of a more informal improvement arrangement. Leaders maintain their job as principals of the lead school and provide leadership and improvement programmes to a low achieving or underperforming school (or schools) that require intervention. "There is a growing body of well-documented evidence from around the country that, where a school is in serious trouble, the use of an executive head teacher / partner head teacher and a paired arrangement with that head's successful school can be a particularly effective solution, and is being increasingly widely applied" (NCSL, 2005, in Pont, Nusche and Hopkins, 2008). England also has experimented with a variety of different school improvement networks that help to integrate schools across jurisdictions to learn from one another. Such models provide educators with access to data about their pupil achievement results and to compare them with schools with similar populations. School site visits across jurisdictions and requirements that school leaders dedicate a percentage of their time to learning from other schools also serve to integrate the educational system by providing lateral learning within and across the profession (Hargreaves *et al.*, 2009)

Research has also shown that other roles can be designed to ensure that principals have scope to work beyond their schools in formal or more informal ways (Pont *et al.*, 2008). Different models can be:

- principals working as mentor leaders within networks of schools, combining an aspiration and motivation for other schools to improve with the practical knowledge and guidance;

- principals who are active and effective leaders within more centrally organised system leadership programmes, for instance within the consultant leader programme, school improvement partners (SIP) and national leaders of education (NLE);

- school leaders who with their staff develop exemplary curricula and teaching programmes that are transferable to other schools and settings.

All of these provide relevant examples of ways in which different jurisdictions have approached the issue of school improvement. For Norway, the challenge in terms of improving teacher quality in the years ahead will be to move beyond isolated projects to a more systemic approach in which each component in the national system—schools, governance bodies, the ministry, and teachers professional associations—is not only linked to, but in many ways actually embedded in each other. This calls for attention to the change architecture that the Ministry is developing in collaboration with teacher unions, parent and community groups, student groups, and local governing councils. It requires striking a balance between top-down steering and support, horizontal learning from educators from one school to another, and bottom-up opportunities for innovation from students, teachers, and parents and community members. Norway has many of the different components of this architecture already in place. The challenge now is to find ways of connecting them with one another so that they are mutually reinforcing and truly generative for pupil learning.

How to ensure that every school has the capacity and is effective to meet the learning requirements of all its lower secondary students.

Recommended Action Steps

1. Develop a national strategy to strengthen schools as organisations to help build their collective capacity for engaging and motivating youngsters and to continuously improve their learning

The diagnosis above points not to a problem of vision or goals—the centrepiece of Norwegian reform is squarely about improving student learning through the Knowledge Promotion-- but to problems of the lack of a clearly defined and mapped out series of interventions that focus on school improvement and bring the limited number of key policy priorities from the Ministry, step by step to the schools and classrooms with clear feedback and indicators of progress to allow for corrections along the way. The diagnosis also points to the need to select a limited number of goals knowing that they must move through several layers of government (including middle managers in the Directorate and most importantly, school owners) to 4 000 schools and making these public and very clear. While whole school change is the right strategy, the Ministry appears not to have set priorities or strategies for school improvement within the broader vision such as

increasing reading scores or refreshing science education so that schools have targets for change and improvement.

Norway needs to consider the current challenges and capacity to respond to priorities from schools. Given that school leaders and teachers still have weak capacity to deliver systematically, and many of the measures need strong leadership and clear guidance from the municipalities, it is important to develop a clear school improvement architecture or strategy that will support these two actors in strengthening their role and having the tools to support schools improvement. This is already a White Paper *Time for Learning* (Ministry of Education and Research, 2009-10) that states that the government expects the 40 municipalities with poor results on national tests to follow up on the learning outcomes of pupils and the learning environment and at the same time pave the way for more support at the national level to municipalities having challenges. A project is underway to explore the tools that municipalities are using. Consolidating these approaches into one strategy would be advisable.

There are a range of international practices that can provide examples for Norway.

- One possibility could be to strengthen the role of the national school improvement department within the Directorate in order to develop a clear support strategy for schools. This department would be linked to "school improvement partners" located regionally to support municipalities (In England, school improvement partners were located in local education authorities and in Ontario "Student success leader" positions were created in each school board. Again in Ontario, a national student success commission brings together diverse stakeholders to speak about effective practices and support their implementation). Norway would have to find the most suitable level to place these partners, whether in the governor's office, so as to promote greater cooperation across the levels, or in other level, directly linked to the Directorate.

- Another approach is to ensure that schools have their own responsibility for improvement and to strengthen support mechanisms that schools can access. For example, the United Kingdom has developed national and local leaders of education or school improvement partners, or teaching schools that can be asked by schools in need to provide the right kinds of professional development and support.

- Lessons learned from reform strategies in England also point to the need to introduce stable processes and a simple and clear set of initiatives that all are aware of. In addition, England constantly monitors and modulates its reform initiatives so that early errors are detected and corrected quickly.

2. Strengthen and support instructional leadership at the school level and across schools by requiring initial and on-going training for leaders and fostering collaborative support between schools.

School leaders play a key role in ensuring student achievement and are the main staff for municipalities and the Ministry to work with. Given the lack of systematic county or regional education structures and variability in support between lower school

leaders in Norway and the central government, one important strategy can be to strengthen the Directorate's role as instructional leaders. As the key driver of the Knowledge Promotion at the school, responsible for leading and reporting back on implementation through school owners, they require considerable support if these reforms are to be successful. The current initiative to train new principals should be monitored and evaluated before it is open to a wider range of school leaders to ensure that it is effective and that it prepares principals to implement the Knowledge promotion curriculum at their school and to support their teachers in the implementation as well.

In addition, Norway may consider defining school leadership standards that signal clearly to the profession what is expected of a school leader. At present, these are implicit in several different documents, such as the Education Act, or the new leadership training programme, but there need to be clearer signals as to what the key role focused on improvement should be.

As part of this, better and more regular feedback to leaders and teachers is needed throughout the system. While there should be a process for replacing school leaders and teachers who fail to improve, such actions cannot even be considered unless there are instruments and capacities to evaluate performance, provide feedback, set up professional development improvement plans, and capitalise on the information provided by classroom assessments (OECD, 2008b). These should help teachers identify areas where their teaching is weak and strong. Standards can help in this process.

Reinforcing practices in system leadership across Norway can also contribute to strengthen performance and motivation in lower secondary education. Among different approaches to explore can be developing national leaders of education that can support underperforming schools, encouraging schools to network with each other with municipalities or county support, or developing the possibility for high performing schools to partner and provide ongoing support to those who are underperforming, as with English federations of schools. The key goal must be to transform school owners and school leaders into a team seen as capable of together mobilizing teachers, families, and community members on behalf of student achievement.

3. Ensure that schools provide a challenging and yet supportive environment and offer a relevant curriculum that gives some flexibility and choice to make it attractive to adolescent needs.

Lower secondary education is the last stage of comprehensive, required schooling in Norway. The challenge for this level, therefore, is to find teaching and learning environments that encourage engagement and motivation of this particular age group within the comprehensive model which has been demonstrated to be a positive achievement for equity and quality. It is important to respond to this issue in a systematic way.

As part of the implementation of the national curriculum, Norway has responded to this already by encouraging schools to define individual work plans for students to meet the need to tailor education more to students' needs, aspirations and capacities as part of the national curriculum. However, the teaching force and school leadership may not be knowledgeable enough about adolescent development and committed to more engaging

pedagogy and more challenging academics. This knowledge gap may mean that it is unlikely that these learning plans will have the desired impact of increasing the relevance of learning so that students are more fully engaged.

As the section on how adolescents learn points out, both neuroscience and developmental theory have converged to reveal that deep learning and content mastery occur within a framework of real-world experience (relevance for society), intrinsic motivation (relevance for oneself), metacognitive strategies (reflecting on one's own thinking), and collaborative or social learning (relationships). Such findings are particularly important in lower secondary schools given the vulnerabilities and special needs of this age group.

Therefore, to encourage lower secondary schools to strengthen student motivation and achievement within the comprehensive model of education, the Ministry can consider providing schools with the capacity to:

- Provide optional curricula activities and/or extracurricular activities to strengthen students' ownership and to enhance their engagement with academic learning.
- Expand efforts to ensure more student-centred learning to improve student proficiency.
- Explore the possibility of giving greater choice among subjects and in the use of more practical learning strategies.

R4. Ensure student success throughout education

Recommendation 4: Ensure that all primary school leavers are prepared to succeed in lower secondary, and that lower secondary students are prepared to succeed in further education and later in their professional lives.

Transitions from one level to the next are key to engagement and performance

Transitions between levels of education challenge all education systems, as shown in Chapter 1. On the one hand, at each new level, schools appropriately escalate the demands on students: they expect more independence, greater intellectual effort, and the establishment of deeper expertise. On the other hand, such new demands require both academic and social support which the school may not provide. This is something that happens right from pre-primary school, but it is particularly true in the transition from primary to lower secondary given that students are leaving childhood and entering the period of adolescence.

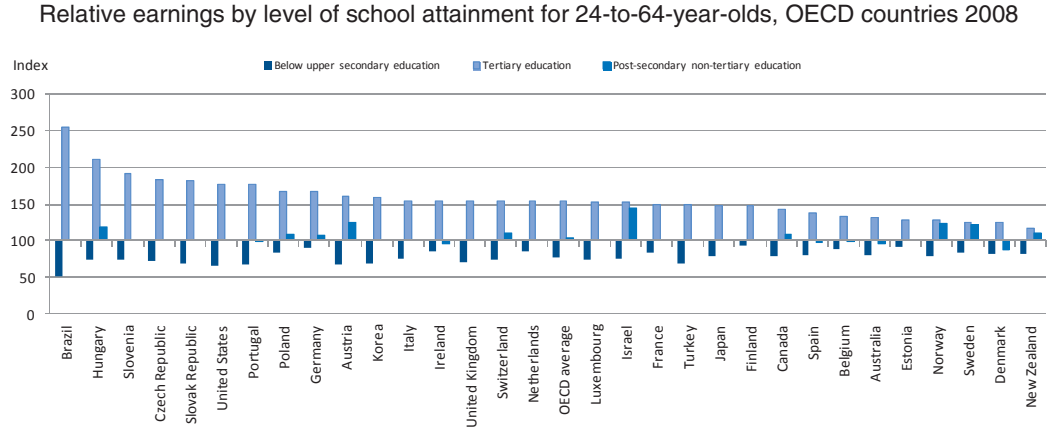
Almost all lower secondary students will need some reorientation as they transition from the more family like environment of primary school to the more peer oriented culture of lower secondary. Some young people will immediately flourish because they are ready for more freedom and more challenge, but struggling students are likely to

experience a decline in academic interest if not achievement. The signs of difficulty or risk factors are high absenteeism, discipline problems, failing grades, and lower engagement in class. Lower secondary school students are also more likely to have strong and not always positive peer relationships at this developmental stage, to have puberty-related issues, and to have greater family conflicts.

The transition to upper secondary poses a second set of challenges. Students are being asked to make their first major choices—whether to enter the vocational or academic pathway, and within these pathways, which focus or strand suits them best. In addition, some students in rural areas may be leaving the family home for school. Finally, students entering vocational education may have yet one more new experience—an introduction to the work place in preparation for later apprenticeship. These transitions are occasions for social and intellectual growth, but they can also put vulnerable students at risk of drop out, loss of engagement with school, and negative influences of peer and popular culture. Research sees secondary education as a crucial link between primary education on one side and tertiary education and/or the labour market on the other. This link faces a double challenge of being inclusive, while at the same time, developing the different students' profiles according to their future pathways. In this sense, depending on the opportunities it provides for students to succeed later in their education and professional lives, secondary education can be either the "weakest link" in the student's education, or its "cornerstone" (Crahay and Delhaxhe, 2003; The World Bank, 2005).

In Norway, around 70% of students graduated upper secondary education between 1999 and 2004. While this percentage is higher than in several OECD countries, Norway[4] considers this number as rather low. Among the main reasons why students leave is the difficulty of the system to challenge and engage students adequately for them to remain at school. Indeed, in Norway a person who has completed a tertiary education or an advanced research programme has the same possibility of falling into a high or a low income group. This seems to be due to a rather low income differential in the country, but may however affect the capacity of the system to encourage higher attainment and satisfying labour demand (OECD, 2010b). Figure 3.9 shows that the difference in relative earnings by education level in Norway is lower than the OECD average, but that it is still slightly higher than in Sweden, Denmark and New Zealand.

Figure 3.9. Relative earnings by level of education, OECD countries 2008



Countries are ranked by decreasing order of relative earnings difference for tertiary education obtained.
Source: OECD (2010b), *Education at a Glance 2010: OECD Indicators*, OECD, Paris.

As pointed out by the Minister of Education, Kristin Halvorsen, since 1994 (when they started measuring this indicator), in 2010 "only 70% of each cohort successfully completed upper secondary education within five years after entry." While later completion also happens, the Minister considered that still around 20% of the adult population was leaving education without the necessary qualifications. This brings some negative effects, such as[5]:

- *Economic costs for the system:* Drop-out brings a high economic cost to society, which has been estimated at around 3 billion Euros a year in Norway.

- *Economic costs for individuals:* There is a difference in lifetime earnings in Norway between people with only compulsory schooling and people with upper secondary qualifications.

- *Personal and social well-being costs:* Dropout reduces the individual's opportunities for lifelong personal development and is commonly associated with negative outcomes in areas such as health, democratic participation and interpersonal trust. There is also a higher risk of criminal behaviour, exclusion from the labour market, dependency on public benefits and low income (Lyche, 2010).

Other reasons for dropout in Norway can be linked to problematic transitions between primary, lower, and upper secondary. Students moving from lower to higher levels sometimes lack the necessary skills to succeed. It is important to note, however, that Norway is far from unique in identifying this problem and its negative consequences, as highlighted in Chapter 1. Unless there is a formal and/or legal structure for connecting the levels of the system, all too often primary school teachers do not know what their subject area counterparts are teaching in lower secondary, and lower secondary teachers are out of touch with their academic and vocational colleagues in upper secondary. In addition, each level may use different pedagogical approaches that can confuse students. Such disconnects are particularly frequent in decentralised and rural areas where teachers do not have the opportunity for regular, face to face meetings across levels. As a result, schools may be spending too much or too little time on basic skills or other aspects of the curriculum and culture. The tendency then is for the receiving school to blame the sending school for student failure rather than to implement a plan for cooperation and alignment.

The dilemma arises on how to coordinate students' needs while passing from one level of education to another. A first step for doing this is to assess the quality of the learning and development opportunities offered to students. The International Standard Classification of Education 1997 identifies three main alternatives of lower secondary education, according to the academic or more vocational pathways offered by the system to the student (Box 2.2).

According to this classification the education systems for primary and lower secondary education across the OECD can be classified in two main groups, depending on whether their primary and lower secondary structures are distinct or combined. Countries that separate these two education levels can also have differences regarding the

possible student trajectories offered later, when students can move to tertiary education and/or professional life (Table 3.2).

Table 3.2. Configuration of lower secondary education across OECD countries.

	Main traits of the system	*Countries*
Countries with single structure and no distinction between primary and lower secondary.	There is a common curriculum for primary and lower secondary education, sometimes keeping students in the same school to minimise the number of decisive choices students must make until they have finished lower secondary.	Norway, as well as Denmark, Finland, Iceland, Estonia, Slovenia and Turkey. In the Czech Republic, Hungary and the Slovak Republic, part of the single structure can overlap with institutions of lower secondary education, named *gimnázium*.
Countries with a structure with a distinct boundary between primary and lower secondary education	Students in lower secondary follow ISCED 2A programmes designed to prepare them for direct access to level 3 in a sequence which would ultimately lead to tertiary education (ISCED 3A or 3B).	Austria, Canada, Chile, France, Germany, Greece, Ireland, Italy, Israel, Korea, Luxembourg, New Zealand, Poland, Portugal, Scotland, Spain, Switzerland, United States, Brazil and the partner country the Russian Federation
	Students follow either ISCED 2B programmes for direct access to programmes at level 3C or ISCED 2C programmes mainly designed for direct access to the labour market at the end of this level.	Australia, Belgium, Mexico and the Netherlands

Research has been inconclusive as to the right configuration of a lower secondary school within the system. Some studies point out that schools that provide lower secondary along with kindergarten and/or primary education, such as Norway, tend to be more developmentally appropriate for adolescents. Others have found that students in these schools were less at risk of behaviour problems, bullying and tended to adapt better when moving to further grades of education. However, other evidence shows more modest or opposite trends. It is not the grade configuration in itself that may define issues such as low bullying, or better capacities of adaptation by students. Rather, success in helping students can be more related with the actual practices in place with the school, which may be sometimes more closely linked or easy to find in certain types of configurations, as highlighted in Chapter 1.

Transitions seem to be challenging for students, not only from one level to the next, but also lateral changes. Some of the PISA 2009 findings show however that school transfers (moving one student from one school to another) seemed to affect negatively student performance. Indeed, the rate of school transfer for students (due to low academic achievement, behavioural problems or special learning needs) explained over one-third of the variation in student performance across countries. In the same way, school systems that track students from early ages show lower levels of equity in outcomes, and no higher average levels of performance than those systems that track their students at later ages.

At the school level, PISA 2009 also found that ability grouping tended to lead to socio-economic segregation, with a strong important negative effect of inequalities of performance between schools. This may be because school transfer is usually difficult for students. Another reason can be that those systems where student transfer or ability grouping are a common practice, teachers and school community may feel less committed to helping lower achieving students. Students in these systems therefore seem more vulnerable to socioeconomic inequities and less likely to fulfil learning and skills gaps at a timely moment in their education (OECD, 2010d).

At the same time, it seems that schools that pursue fewer student transfers of their students to other schools have greater autonomy to address students' needs in the areas of curriculum and assessment. School principals in these systems reported more often having more responsibility for establishing student assessment policies, deciding which courses are offered, determining course content and choosing textbooks. This capacity of action and longer relationship with the student can help to better fulfill the learning gaps of the student before moving to upper education levels.

As pointed out in Chapter 2, Norway's PISA 2009 scores show improvements in achievement particularly in higher performance of lower performing students, rather than high achievers, so this is an issue. Only 1% of Norwegian pupils were at level six in science and 2% were at level six in mathematics in PISA 2006. The TIMSS survey (Trends in International Mathematics and Science Study) also shows that lower secondary pupils in year eight have scores in mathematics and science well below the international average (500) even though there has been a small improvement in mathematics since 2003. Indeed, the Norway pupil survey indicates that about one in four lower secondary pupils do not find school challenging enough. The OECD-Norway Steering Group also heard consistently that lower secondary students may not be sufficiently challenged academically; one interpretation of the PISA scores is that primary schools must pay attention not just to struggling students but also to those who can accelerate and deepen their learning. High achieving students can be an inspiration to their peers and teachers, and raise the aspirations and effort level of all.

While the data confirms inefficiencies in transitions between levels of education, pinpointing the causes in Norway and addressing them is challenging. The problem can be attributed to issues as distinct as grading and governance —in other words, within the school system and external to it. But it is most important to situate these specific issues in the broader context of what we know about how young people learn, the factors that foster learning, those that hinder it and how to change the learning environment and content in order to help the student acquire the necessary skills (for example, becoming meta-cognitive, self knowing and self assessing learners).

Focusing on student centred learning aims to improve student proficiency through a system that combines formative and summative assessment. It is considered that balancing these two approaches will help establish pathways for improvement for students. To achieve this, it is also important that the education system can provide as well varied and attractive pathways for students to follow. This can help for every student to leave lower secondary education with the appropriate skills. Other important elements have been identified by Jobs for the Future as the following (JFF, 2011):

- "address the needs and interests of each learner while meeting on a common set of rigorous learning competences;
- include the development and assessment of cognitive and non-cognitive skills that are increasingly important in the 21st. century, including problem-solving, analysis, and creativity;
- locate learning in the context of students' differing prior knowledge and experiences and employ research about adolescent social and brain development to address learning gaps and enable students from all entering skill levels get to mastery;
- build educators' abilities to be strong facilitators and coaches, skilled in deploying a broad range of instructional practices in order to engage all learners (project-based learning, collaborative learning, hands-on learning, etc.) and,
- transfer greater responsibility for learning to students supporting their development of metacognitive skills, capacity to set and understand learning targets, and ability to receive ongoing feedback focused on improvement".

As for issues within schools in Norway, the OECD-Norway Steering Group heard from a number of informants that teachers may not give sufficiently feedback to students about their progress and self assessment embedded in students' learning strategies. This topic is also highlighted by the PISA+ results which note as well that teachers are not used to including students in planning lessons, or asking them to reflect on their work. One specific example about feedback, noted a number of times, concerns grading policies.

In Norway, students are given numerical grades on a scale from one to six for the first time when they start lower secondary school. In primary school they have assessments without marks, receiving teacher narrative comments (Norwegian Directorate for Education and Training, 2011). Students note that the transition into lower secondary with a new grading system can be abrupt, and they may be confused by their grades. This is a symptom of a problem, rather than the problem itself. There is little knowledge of how teachers assess their students in primary education, whether they provide students feedback about their strengths and weaknesses. When faced with a transition from feedback (or lack there off) to numerical grades students may not know how to calibrate the equivalence between comments and grades. Norwegian students therefore start a new stage in their education and may not understand or have the self-knowledge to understand their learning gaps. This can affect their motivation to stay in education, as well as their performance in their future studies and in their professional lives.

As for the transition from lower secondary to upper secondary, almost all students move on to upper secondary, but their achievement is not uniformly satisfactory. As pointed out by the OECD report, Jobs for Youth (OECD, 2008c), among the main priorities and concerns of the Norwegian Government is to raise the level of preparation of young people when they leave the education system and enter working life and to reduce drop out. Evidence shows, however, that dropout is not due to the socioeconomic

background of students—students entering upper secondary with similar grades but different family backgrounds have similar academic outcomes. The problems appear to be attributable to inappropriate choices of upper secondary program, and thus point to inadequate career advice at the end of lower secondary, and gaps in learning, particularly weak reading ability.

In addition, students may not see the links between their schools and careers. The government is aware of the need to develop labour market and welfare institutions that maximise youth labour market opportunities and incentives to participate in the workforce. Research has shown that students adjust their career choices according to the information available to them on issues such as salary levels, as well as the probability of obtaining a job in the different specialisation areas. Career guidance however does not seem either to address student aspiration and labour market needs in lower and upper secondary education. Since salary variation in Norway is not high within a specific education level, information provided to students needs to focus on the characteristics of a job at previous stages of education. This can help students better identify which gaps in their learning they need to compensate at their current education levels for a profession that they consider of their interest. Although career guidance seems to be stronger for 15-year-olds in Norway than in other OECD countries, this is not necessarily the case for students in upper secondary education (Kuczera *et al*., 2008).

In Australia, schools in Victoria and Queensland receive an individualised report that shows the destinations of early school leavers along with a comprehensive survey across the system. In this way, schools can better identify those pathways and learning instruments that need to be developed for the variety of students attending their schools. It also helps creating greater awareness on the importance of engaging students to stay at school.

Also, the Australian Capital Territory (ACT) has recently implemented a reform to address engagement for students around age 15-17. As pointed out in one of its consultation papers prior to this reform disengagement *from school* is not the same as disengagement *from education*. The main trait of this reform is therefore that from 1 January 2010, compulsory *school* age will be replaced by a compulsory *education* age (which currently ends at age 15). Under this new legislation, young people will be required to remain in education until achieving year ten and then participate full-time in education, training or employment until completing year 12 or equivalent, or reaching age 17, whichever occurs first. This reform was made to ensure that schools encourage students to remain at education. At the same time, however, students are not forced to stay at school if they find that this approach to learning is not meeting their needs. The ACT expects that this will help provide greater opportunities for better employment capacity and prospects, improving earning potential for all young people[6] through broader and worthwhile pathways (ACT, 2008).

Dropout from VET is significantly higher than from the university pathway in Norway, and difficulties in reading are prominent. This problem affects around half of VET first-year students (Kuczera *et al*., 2008). These data raise such questions as: Is lower secondary providing a wide-enough array of reading materials and reading strategies? Are students being prepared to read technical and career-related texts? Are students building an appropriate vocabulary in Norwegian and English (since many

technical texts are in English)? Such questions should be considered, but perhaps most important is examination of the requirements of teacher education. In many countries, lower secondary school teachers receive no training in how to teach reading in their subject areas. As texts become more complex, these teachers are not able to help students navigate through them.

In regard to governance as a problem in the transition to upper secondary, compulsory education (primary and lower secondary education) is the responsibility of the municipality, and upper secondary education is the responsibility of the county. The county governor has the responsibility and apparently, the statutory authority for supervising and supporting school owners teaching compulsory education, but it is unclear how the governor ensures vertical alignment from primary school through upper secondary. As pointed out in the governance section of this report, with responsibility for lower and upper secondary school levels located in different bodies, articulation and alignment are challenging dimensions of the Norwegian system, and the risk of disconnects are great. It appears that collaboration between the systems is more voluntary than required, and, indeed, it was not clear to the OECD-Norway Steering Group that any consistent articulation between different sectors occurs. While the governance structure is external to the schools, it nonetheless has a profound impact on school performance, and particularly on transitions between levels.

How to ensure that all primary school leavers are prepared to succeed in lower secondary, and that lower secondary students are prepared to succeed in further education and later in their professional lives.

Recommended action steps

1. Prepare all students to enter lower secondary education by intervening in early childhood educatino and care, as well as primary school and providing support as soon as learning difficulties are identified.

There is selected evidence that shows that some of the weak achievement results of students upon entry to lower secondary have their origins early in early childhood educatino and care and primary school. While Norway has a statutory requirement that education be adapted to the individual pupil as well as a strong belief in inclusive schools, it is not clear that students with difficulties receive the instruction and support they need in a timely fashion. Of particular concern is that students have the math, writing, and reading competences and well-developed critical thinking and knowledge application strategies to flourish in the more demanding environment of lower secondary school.

Norway might consider requiring that students be screened at least yearly in primary for potential reading and math difficulties to ensure that students who have fallen behind receive intensive catch-up instruction and that their progress is regularly monitored. As students move into sixth and seventh grades, their teachers should ensure that they have progressed. In addition, in regard to numeracy, because math is cumulative, 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 requiring 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.

2. Support the transition to lower secondary school by creating a culture of assessment, self-assessment, and feedback for improvement in all classrooms from primary, which allows students to understand their learning profile within an adequate framework of improvement.

Teachers and students require training to provide good feedback and to use it well. Primary schools must provide more and better assessment, and students must be taught to self-assess. Without developing a culture of assessment that is focused on improving the learning process itself, students will continue to enter lower secondary without a clearer idea of where they stand and how to improve.

In addition, narrative reports should be specific enough to help students and their families understand each student's learning profile, and lower secondary grading should also be accompanied by narrative or by student teacher conferencing to discuss the meaning of each student's report.

One possibility can be to build upon the Better Assessment Practice project so that lower secondary teachers have access and knowledge of tools to use a range of assessment practices, and in particular Assessment for Learning, so that they regularly examine student work, discuss that work with their colleagues, and provide students with explicit recommendations on how they can improve their learning.

3. Ensure alignment of curriculum sequences and student supports by establishing vertical teaming in the content areas and assessing individual student needs as students move from primary to secondary school. Also, ensure effective transitions into upper secondary/VET (county to municipality) by enhancing advice and curricular alignment.

Teacher teamwork is critical to students' success in lower secondary schools, but because teachers are likely to be teaching in content areas, they appear not to work closely enough together to have a good understanding of common pedagogical approaches, individual student problems, and opportunities for interdisciplinary and inquiry based study. This horizontal alignment should be coupled with what has come to be called "vertical teaming." A vertical team is a group of educators (teachers, counsellors, school leaders) from different grade levels who work together to develop a curriculum that provides a seamless transition from grade to grade and level to level. Because team members know what their colleagues expect students to master, they can then help students navigate the transitions between levels of education. Teachers can spend more time on new concepts and material by reducing the time spent repeating what teachers at previous levels have covered. In turn, they can also provide a preview of what the next level brings.

Switzerland provides an interesting example of recent initiatives to ease the students' transition to upper secondary. Some projects are being put in practice in several cantons

to help students during their last year of lower secondary. This projects entail compiling performance profiles for individual skills, specific correction of learning deficiencies, or project teaching. Several cantons are using this framework in their career guidance and vocational preparation classes. As part of the "Nahtstelle project", students receive advise on the process of choosing a career, filling possible learning gaps that could hinder their performance in the coming education stage, as well as clarifying what courses could best help address gaps in training (Institut suisse des médias pour la formation et la culture, 2011).

Norway has implemented two new initiatives to address choice of programme for students: Selection of Education and Working Life Skills. *Selection for education* is a mandatory subject across the three years in lower secondary education. It provides information about: a) programmes in upper secondary education; b) the differences between academic upper secondary and vocational education programmes; and, c) job and career possibilities for each. For vocational education, a pilot course, Working *Life Skills,* started in 2009. Its main objective is to give students the opportunity to experience the world of work, and thus explore vocational choices. It is based upon competence objectives of currently existing vocational education programmes. Both of these should contribute to solving the problem of inappropriate choices that students make of pathways in upper secondary. Nonetheless, Norway may want to reconsider the policy of providing to all students one of their three choices of career programmes since some students may be shifting programmes or dropping out because they recognise too late that the labour market prospects are poor for their chosen area. At least, it should ensure that information on job and career possibilities uses “real time” data to inform students about jobs prospects.

In regard to alignment across the transition to upper secondary, since the county governor has the responsibility for supervising and supporting school owners in upper secondary education, and also works with compulsory education, the governor should work to ensure vertical alignment from primary school through upper secondary. Cooperation and exchange between counties and municipalities is required if preparation for the working life is to improve overall, and students at risk of drop out are to be reengaged with education. Oslo, which is both a county and a municipality, provides a much better structure for coordination across levels than other jurisdictions, and lessons may be drawn from this example. Since all signals are that Norway is not going to change in the foreseeable future to county responsibility for all schools, the Ministry and Directorate must make alignment a requirement with sanctions coupled with support if alignment does not improve.

NOTES

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

[2] The topic of evaluation and assessment is not covered in detail in this report, as it is in process of analysis as part of the OECD thematic review on evaluation and assessment.

[3] RATL has officially ended and evolved into other projects such as the London Challenge and the Manchester Challenge)

[4] It should be noted that Norway's definition of dropout may vary from that of other countries, such as Iceland or Sweden. In Norway, dropout is used for those persons who have completed less than three years of upper secondary after a certain number of years after lower secondary and are not enrolled in any upper secondary programme. Therefore, a student who has not obtained the certificate, but nevertheless completed most of the curses is not considered a dropout (Lyche, 2010, p. 10).

[5] *Link to speech:*
http://www.regjeringen.no/nb/dep/kd/aktuelt/taler_artikler/kunnskapsministerens-taler-og-artikler/taler-og-artikler-av-kunnskapsminister-k/2010/Early-educational-support--an-investment-in-the-future-.html?id=611730

[6] http://www.det.act.gov.au/major_changes_to_education_requirements

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