

## Chapter 6

### Education system evaluation

*In recent years, Norway has developed a strengthened structure to monitor the education system. The Directorate for Education and Training is responsible for NKVS and monitors the quality of the school system via a range of statistical indicators and commissioned research studies. The key indicators to measure education system performance are the results from international assessments, the national tests, students' final assessments and the Pupil Survey. The Directorate for Education and Training uses a stable reporting framework to evaluate the Norwegian school system but also augments the basic national information system depending on the availability of results from various measures. Since 2006, there has been a co-ordinated national inspection focused on school owners' systems to assess school compliance with the Education Act. The implementation of national initiatives is monitored and evaluated, and there has also been focus on strengthening monitoring at the local level. However, many municipalities lack self-evaluation capacities and the external monitoring of municipalities by County Governors' offices remains rather light. A key challenge in national system monitoring is the lack of outcome measures that would allow the monitoring of changes over time.*

This chapter looks at system evaluation within the Norwegian evaluation and assessment framework. System evaluation refers to approaches to monitor and evaluate the performance of local education systems (*i.e.* school owners) as well as the education system as a whole. The main aims of system evaluation are to provide accountability information to the public and to improve educational processes and outcomes.

## Context and features

### *Responsibilities for evaluation of Norwegian primary and secondary education*

#### *Monitoring primary and secondary education in Norway*

The Directorate for Education and Training has the major responsibility for monitoring primary and secondary education in Norway. The Directorate is responsible for the NKVS quality assessment system (see Chapter 2) and monitors quality via a range of key statistical indicators and commissioned research studies and the inspection of school owners to ensure they “comply with legislation, and that they implement adequate measures to deal with challenges” (Norwegian Directorate for Education and Training, 2011). School owners should be responsible for quality monitoring at the local level. Part of the Directorate’s role, therefore, is to ensure that school owners have adequate access to national monitoring results.

County Governors are responsible for conducting national and local inspections of the public school owners and the Directorate is responsible for the inspection of private school owners (see below).

#### *Providing evidence on the performance of the primary and secondary education system*

The Directorate for Education and Training has the overall responsibility for national education statistics, including the production, reporting and analysis of results and it also conducts research and evaluation studies. Evaluation of national strategies and measures is an important part of the studies. As part of these responsibilities, the Directorate manages a Compulsory School Information System (GSI) which contains basic descriptive statistics on school demographics, resources and organisation.

For upper secondary education, the Directorate draws on statistical information provided by partner organisations. The county authorities manage a central database on upper secondary education statistics (VIGO), which is the source for indicators compiled by the Directorate as part of its monitoring system. Statistics Norway (SSB) collects individual student data on participation and completion of upper secondary education and training.

The Ministry for Education and Research has the major responsibility for developing international indicators on the primary and secondary education system, as part of the joint UNESCO-OECD-EUROSTAT annual data collection on enrolment, graduation, finance and personnel.

Statistics Norway provides data series (by individual student using their national identification number) on student’s gender and background characteristics (*e.g.* parental occupation and educational level, migrant background, etc.) that can be used by the Directorate to analyse national outcome measures in primary and secondary education.

Further, SSB also compiles economic and demographic data on Norwegian municipalities which can be used to interpret national outcomes measures at the municipal level.

### *Major tools to measure performance in education*

#### *National tests of student performance*

Since 2007, Norway has conducted full-cohort national tests of basic skills in reading (Norwegian), mathematics and English at the start of Years 5 and 8. With the exception of the English test, the national tests are designed to measure cross-cutting competencies against competency aims in several subjects in Years 4 and 7. The emphasis here, therefore, is to monitor students' basic skills that should aid students' learning and development in all areas of compulsory education. In 2009 the tests in English and mathematics were administered electronically for the first time, although reading (Norwegian) tests remained paper based (Norwegian Directorate for Education and Training, 2010). Since 2010, there are also national tests in Year 9.

Results are reported in the annual summative report on education in Norway (the *Education Mirror*) and are used to compare the performance of counties and different student groups (see Box 6.1).

#### *Overall achievement and performance on examinations in Year 10 and upper secondary education*

Since 2002, overall achievement marks are reported for students in Year 10. These are teacher-awarded grades that respect a common 6-point grading scale. Further, each student is selected to sit two final examinations, one written and one oral. The written examination is centrally set and can be in first or second choice Norwegian, English or mathematics. Oral examinations are locally set and are offered for a broader subject selection. All these results form the basis of an indicator on achievement in lower secondary education as part of the national monitoring system (see Box 6.1). There is a similar system of overall achievement marks and selection of students for examinations in upper secondary education, but the national monitoring system mainly focuses on results in "common core subjects" for which more students are selected in examinations. Results are also reported for major subjects in general and vocational programmes. However, there is no overall national indicator for upper secondary achievement.

#### *Measures of the teaching and learning environment*

Norway introduced a pupil survey in primary and lower secondary education in 2002/03 and this has been compulsory in both public and private schools since spring 2004 in Years 7 and 10, plus the first year of upper secondary education (Norwegian Directorate for Education and Training, 2007). It can also be administered in other years. In 2009, 330 000 students in Years 5 to VG3 responded (Norwegian Directorate for Education and Training, 2010). Norway reissued a suite of surveys in 2007 to match the Knowledge Promotion, including the compulsory Pupil Survey and voluntary surveys for teachers and parents. The three surveys are thematically co-ordinated to allow comparison of answers from pupils, teachers and parents. The surveys provide insight to student well-being, motivation, co-operation and opportunity for student voice, classroom climate and physical learning environment, plus perceptions of adapted teaching and

teacher follow-up. The Pupil Survey can be completed on line in autumn (October to December) or spring (mid-January to end April).

Norway also participates in the OECD's Teaching and Learning International Survey (TALIS) which provides information on teachers' perceptions of various aspects of the school environment.

### Box 6.1 Reporting of national outcome data

The major vehicles for reporting results from the national monitoring system are the Directorate for Education and Training's annual summative report on education in Norway (the *Education Mirror*) and the web-based School Portal (*Skoleporten*). Both respect a common structure: learning outcomes; learning environment; completion rates in upper secondary education; resources; and school facts. Each edition of the *Education Mirror* will present a different selection of results in each area depending on the analytical interest and also includes both a special introductory chapter providing examples of schools participating in national initiatives and a final chapter on "Quality development" providing information on national research and initiatives to promote better local monitoring of quality. Results may be augmented by periodic national survey results, but the major outcome measures are presented in the *Education Mirror* as follows:

- **Learning outcomes – primary and lower secondary education:** results from international studies where available, national tests and Year 10 overall achievement and examination marks.
  - National test results are reported by different "mastering levels" (three for Year 5 and five for Years 8 and 9) and by the 19 counties and also – in the password-protected part of the School Portal only – by school. In the 2009 edition of the *Education Mirror* results were also reported by migrant background and by level of parental education (standardised results for years 2007 to 2009).
  - Year 10 average overall achievement marks in 14 subjects (teacher awarded grades 1 to 6, where 6 is the highest), plus examination marks (each student is selected to sit two final examinations, one written, centrally set and one oral, locally set). An indicator of "lower secondary points" is derived from the 14 overall achievement marks and the two final examination marks (total of 16 marks), comprising all results for students with at least 8 marks. This indicator is reported in the *Education Mirror* by type of school and by migrant background. The *Education Mirror* also provides analysis of differences between overall achievement marks and examination marks.
  - Orderliness and conduct grades (good, fair or poor).
- **Learning outcomes – upper secondary education:** the overall achievement and examination marks in 12 education programmes following the Knowledge Promotion (1 to 6, with 2 being the minimum pass mark). The *Education Mirror* reports:
  - Average marks in the common core subjects (Norwegian, English, practical and theoretical mathematics, natural sciences) by general and vocational programmes and by gender.
  - Average overall achievement marks and marks in written examinations in selected subjects in general upper secondary programmes and overall marks and marks in interdisciplinary examinations for vocational programmes. This allows analysis of differences between overall achievement marks and examination marks in both general and vocational programmes.
  - The percentage of apprentices "failing", "passing" or "passing with distinction" the Craft of Journeyman's examinations.
- **Learning environment:** results from the annual national pupil survey and international studies where available.

Source: Norwegian Directorate for Education and Training, 2007, 2008, 2009 and 2010.

### *Participation in international student surveys*

Norway attributes much importance to international benchmarks of student performance and has participated in most major international studies providing trend data on outcomes at different stages of compulsory education in Norway since 1995. Norway has administered tests to students in Grades 4 and 8 as part of the International Association for Educational Achievement's (IEA) Trends in Mathematics and Science Skills (TIMSS) studies in 1995, 2003 and 2007. Participation in the IEA's Progress in Reading Literacy Skills (PIRLS) study also provides an international benchmark for Grade 4 students' reading literacy over time, with a study in 2010 and the next in 2012. Further, Norway has participated in the OECD's Programme for International Student Assessment of 15-year-old students since its inception in 2000, testing students' knowledge and skills in reading, mathematics and science at the end of lower secondary education. At the upper secondary level, the IEA's TIMSS advanced study in 2008 provided information on student performance in mathematics and physics. As such, Norway has a wealth of information on students' core skills in reading, mathematics and science at three major points in compulsory education to compare the system internationally. Norway also supports international comparisons on non-cognitive outcomes, including its participation in the recent IEA International Civic and Citizenship Education Study (ICCS 2009).

Results from international studies have heavily influenced policies in Norwegian education and have "contributed to putting basic skills on the national agenda", "stimulated debates on how changes to teaching, curricula and teacher training can explain changes in the performance of Norwegian students" and provided "a significant knowledge platform for a number of key documents, such as the Reports to the *Storting* (White Papers) and political strategies" (Norwegian Directorate for Education and Training, 2011).

### *National inspections of school owners' monitoring systems*

There is legal provision for the inspection of school owners' local monitoring systems. The main legal basis for inspections is the requirement for school owners to have a system in place to assess and subsequently follow up school compliance with legal requirements as defined in the Education Act and the Private Schools Act (Norwegian Directorate for Education and Training, 2008). The Directorate for Education and Training conducts inspections of private schools, but the 18 County Governor offices are responsible for the inspection of public school owners. However, the Directorate has developed a standard manual on inspection methodology that County Governors should follow. An inspection report is published following each inspection and County Governors' produce annual reports which include some information on inspections undertaken.

Since 2006, there has been an annual co-ordinated national inspection with the principal theme of checking "routines, procedures, competence, communication and clarification of the school owner's role" (Norwegian Directorate for Education and Training, 2011). The focus of the 2010 and 2011 national inspections is on the students' psycho-social environment. National inspections do not specifically examine learning outcomes. County Governors may – and do – undertake other inspections of school owners, besides the co-ordinated annual national inspection.

Since 2009, there has been a requirement for school owners to produce an annual report on the quality of their school(s). In 2010, a new standard report Template (the status report) was made available for school owners on the School Portal. The status report tool includes automatically completed data entries for the specific school(s) on a set of compulsory indicators, as well as some suggested indicators.

## Strengths

### *Strengthened structure to monitor the education system*

The creation of the Directorate for Education and Training in 2004 gave more prominence and coherence to the national monitoring system. The Directorate has overall responsibility for reporting on educational statistics and as such can map out information needs and prioritise statistical/reporting development areas. For example, this has led to the introduction of national tests to provide outcomes data during primary and lower secondary education. Further, the Directorate has worked with County Governors to develop a common framework for inspection of school owners and the introduction of an annual national inspection on a common theme has brought more cohesion to this process.

### *National monitoring of equity, the learning environment and priority areas*

Norway is in a strong position to monitor the equity of education outcomes, with robust information on individual student characteristics and economic and demographic data aggregated to the municipal level. This allows the possibility to monitor outcomes for males and females, as well as different socio-economic and migrant groups.

Norway also collects evidence of student views on their learning environment and offers the tools to complement this with teacher and parent views. Such information is analysed and reported on in the *Education Mirror* and feeds into the policy debate in the key thematic areas, for example adapted teaching. The pupil surveys provide important measures of students' views on their well-being, motivation and co-operation. Confident and motivated students are more likely to go on to follow further education and to continue learning during their lives. Knowing how to collaborate with others is also of key importance in students' future educational and professional pathways, as are the behavioural aspects of orderliness and conduct. As such, the Pupil Survey and relevant teacher grades provide information in these key areas and complement the national tests of basic skills, as well as the derived measures of student performance in 14 subject areas at the end of compulsory education. The attempt to report nationally on a broad set of outcomes is a strong signal of the expected outcomes from Norwegian education.

Norway also makes use of periodic monitoring of priority policy areas. A recent example is the indicator system to monitor quality in teacher education and in the profession (GNIST). The monitoring system was implemented in 2008 and contains five target areas (recruitment, quality in education, quality in teaching, quality in school leadership, improved status for the profession) with 23 indicators to monitor improvement/progression. The basic approach is to make use of existing information available nationally, but to highlight this in a coherent set of indicators. At the same time, GNIST has used some firsthand research, *e.g.* via the administration of surveys to teacher educators, school leaders and teachers on their perception of quality in education.



## ***Strong summative reporting on the system drawing on a wide evidence base***

### *A stable reporting framework*

The Norwegian Directorate for Education and Training uses a stable and common reporting framework to evaluate the Norwegian school system. The framework includes five core areas: learning outcomes; learning environment; completion rates in upper secondary education; resources; and school facts (see Box 6.1). This systematic approach clarifies the national reporting process and ensures harmony across different reporting mechanisms (e.g. the *Education Mirror* annual summative report and the *Skoleporten* electronic platform). Further, the fact that the Directorate has primary responsibility for statistical reporting on the education system ensures a coherent overview of results from different reporting systems (e.g. VIGO and SSB databases). It also ensures a way to monitor the reporting/statistical development needs at all levels of education and to prioritise areas for improvement.

### *Inclusion of national and international evidence and case studies*

At the same time, this approach allows the basic national information systems to be augmented at different stages depending on the availability of results from various measures, e.g. “learning outcomes” may include international results from cyclical surveys when they are available, or from different research studies. The Directorate has its own research portfolio, as well as drawing on results from research commissioned by the Ministry of Education and Research and academic research in general (Norwegian Directorate for Education and Training, 2011). Equally, this basic reporting framework as applied in the *Education Mirror* includes evidence from evaluation studies conducted in other countries (e.g. evaluations undertaken by the Swedish National Agency for Education).

The *Education Mirror* also includes a chapter on “Quality Development” which provides evidence from international qualitative studies and policy reviews, e.g. the OECD Improving School Leadership policy review in the 2006 report, and may present case studies or approaches used in other countries, e.g. the national tests systems in Denmark and Sweden (Norwegian Directorate for Education and Training, 2007).

### ***New “thematic” focus for nationwide inspections***

Inspections are becoming increasingly relevant to the national monitoring system. The first “national inspections” were launched in 2006 and have so far primarily focused on school owners’ systems to assess school compliance with the Education Act and to follow up on results. 2010 saw the introduction of a thematic nationwide inspection, with a focus on the students’ psycho-social environment. In theory, this new approach holds great potential for inspections to go beyond a focus on whether or not there is a monitoring system in place, to actually look into the different aspects that are monitored. However, “quality” will only be captured to the extent that the law addresses this, for example, in the case of the 2010 inspection students are legally entitled to attend a school with a secure, positive learning environment. Nonetheless, this should lead to a greater reach into schools and indeed, during the 2010 national inspection, inspectors went into schools. In designing the national inspection, key stakeholders were consulted including the Norwegian Student Organisation that contacted its regional members in preparation for the inspection. The Directorate and County Governors are preparing guidelines on the

number of municipalities and/or schools that each County Governor must inspect during the national inspection (Norwegian Directorate for Education and Training, 2011).

### ***Basic philosophy to monitor and evaluate the implementation of national initiatives***

The Directorate takes the basic approach to monitor the implementation of national initiatives. The aim of such evaluations is to determine how well national strategies and plans actually function in practice and to enable the Directorate to draw lessons from such experience to either refine particular measures or strategies or to better design future initiatives. In the case of national measures, such as the national tests and the final examinations, evaluation is conducted on a regular basis (Norwegian Directorate for Education and Training, 2011). Also, a sample is taken of results from the mapping tests offered to schools for student assessment in order to further improve and develop the mapping tests. Other, broader and periodic initiatives are also evaluated such as the national strategies for science and reading (2003-2007). Evaluation results are presented and analysed in the *Education Mirror* chapter on “Quality development” (see for example the discussion of the Better Assessment Practices project in Norwegian Directorate for Education and Training, 2009). Often evaluations seek to judge how effectively national measures are used at the school and municipal levels. For example, in the autumn of 2009, a survey was conducted to ascertain the extent of implementation and follow-up of the Pupil Survey by school leaders and school owners and found that larger schools tended to follow up more on the results, e.g. discussing these with the community, including pupils’ parents and sometimes in teacher performance discussions (Norwegian Directorate for Education and Training, 2010).

### ***Approaches to streamline and prioritise national monitoring and reporting***

The Directorate has established a multi-year framework for administering sample-based user surveys to ensure a cyclical coverage of key topics, while limiting demands on users to complete surveys. The regular collection will allow monitoring and reporting on seven key areas, but will ensure that school leaders and municipalities only complete a survey once every 18 months (Norwegian Directorate for Education and Training, 2011). Also, key information on education regulations is now presented in a more accessible and coherent manner on the Directorate website.

### ***Requirements for local system monitoring and efforts to build evaluation capacity at the local level***

There has been a two-fold national approach to strengthening monitoring at the local level. First, school owners are legally required to have a system in place to monitor school compliance with legal requirements. This was reinforced in 2009 by a requirement for school owners to produce an annual report on “the state of basic education” in their school(s). This status report must include a compulsory set of indicators designed to monitor national goals. The Directorate, via the School Portal, has provided since 2010 a Template tool for school owners to complete such reports, which includes data for both compulsory and suggested indicators (it is up to school owners whether or not they report on the latter). The Directorate reports that this Template tool has been well received by municipalities. This reflects a general move by the Directorate to provide tools to help municipalities with implementing effective evaluation and assessment policies.



Second, the Directorate also provides capacity building and support offers for municipalities facing challenges related to the quality of their local systems. Notably, the Directorate has recently established a “Guidance Corps” of exemplary school leaders who will intervene in municipalities that have been targeted as needing help with capacity development (amongst others the municipalities from the “K-40” project). The “K-40 project” is a voluntary support offered to municipalities by the Directorate and seems to be a welcome initiative – of the 40 municipalities contacted, 31 decided to participate.

In addition, there have been initiatives by many municipalities to build local evaluation capacity, *e.g.* municipal networking to build capacity/competencies for quality assurance. Efforts range from official networks that are initiated via KS – some of which focus on evaluation and assessment – to local initiatives that are deemed useful and adopted by other municipalities. For example, Malvik is a small municipality that has developed an online guidance system offering information to schools to use in their own evaluation. The system includes guidelines for schools on how to work with national measures and requirements and was developed in collaboration with school leaders. Malvik’s online guidance system has been adopted by other municipalities.

Since 2005, KS has launched different municipal “efficiency” networks and offers quality monitoring tools for municipal use (Norwegian Directorate for Education and Training, 2011). In general, networks consist of between four to eight municipalities and run for four to five meetings and then disband (see also Chapter 2). There are many different regional networks, plus one network with the 10 largest municipalities which focus very much on benchmarking style exercises. Oslo is the biggest municipality and has a well developed monitoring system for its schools with clear benchmarks and targets (see Box 6.2).

### Box 6.2 Monitoring education outcomes in Oslo

Oslo is the largest school owner in Norway and is in the singular position of being responsible for both primary and lower secondary schools (as a municipality) and upper secondary schools (as a county). There are eight school group areas in Oslo, each with an area director and about 30 schools. Area directors sit in the Oslo Education Department and will visit schools at least once a year to discuss school results with the school leaders. Each area also has its own services for educational and psychological counselling and speech therapy.

#### **Performance management using both national and local measures and local goals**

Oslo uses a well developed performance management system and complements national outcome measures with local measures of science and ICT competence at the end of Grade 4 and at entrance to upper secondary (Grade 11). Oslo also chooses to run the national pupil survey in Grades 5, 6 and 7 of primary school and conducts a phone-based parent survey that is also offered in selected languages used by the major immigrant groups in Oslo.

There is a clear use of benchmarking and Oslo sets 125 goals overall. Each school is responsible for reporting back on progress against these, but can prioritise particular goals that are most relevant to the school context. Further, Oslo sets six compulsory areas of school improvement/development and Oslo schools are expected to develop a strategic school improvement plan with clear targets.

There is an information system including data on individual students from Grades 1 to 10 – although in the case that students change school, it is their right to not carry on information regarding their earlier school career.

### Box 6.2 Monitoring education outcomes in Oslo (*continued*)

#### Local inspection of priority areas

In Oslo, there is a well developed local inspection system including the inspection of curriculum which involves school visits and discussions with teachers. In this context, the inspectors will examine teaching plans and criteria for assessment in different subjects and may also interview teachers and students. However, inspectors do not observe lessons.

There are support structures in place to follow up schools in need of improvement. Oslo offers advisors in mathematics, science, reading and assessment. A team of advisors and/or experts from universities or qualified consultancy business will go to schools to work with the school management team. There is also a system of targeted improvement (the Oslo Programme for Improvement) with a current focus on students in lower secondary schools.

*Source:* Interviews with the Oslo Education Department.

## Challenges

### *National outcome measures do not allow the monitoring of changes over time*

#### *Monitoring changes in performance from year to year*

Currently, Norway does not have national measures to indicate performance changes over time. It is not possible to measure improvement over time with the national tests, as all questions and tasks used in the tests are publically released and they “have a somewhat unequal distribution on the scale for the different skills, and the degree of difficulty can vary somewhat from year to year” (Norwegian Directorate for Education and Training, 2010). That is to say that there is no stable, confidential item bank to allow the linking of results across years and the need to create new items also leads to a variation in the actual overall difficulty of each test.

#### *Monitoring performance differences among municipalities*

The School Portal presents results of student final grades and final examinations nationally, by county, by municipality and by school. However, only a sample of students is randomly selected to sit final examinations. As officially noted on the Directorate’s website, this is meant to be a nationally representative sample and will not be a representative sample for municipalities or schools. There is a further note of caution about using school and local level results for quality monitoring. In the case of both overall grades and final examinations there is a lack of stability at the school and municipal levels across years. Regarding the overall grades, the Directorate cautions that these should be interpreted with care at the school level.

Further, there is some question as to the consistency and fairness of grades awarded by teachers across schools and municipalities (see Chapter 3). Analysis in the *Education Mirror* shows great discrepancy in particular among the locally set oral examinations.

### ***Light monitoring of municipalities***

The County Governors have responsibility for conducting local and national inspections of public school owners. However, “there are great differences in how inspections are carried out by the County Governors’ offices” (Norwegian Directorate for Education and Training, 2011). There have been efforts to address this by collaboratively developing inspection guidelines at the national level, but there are no national competency profiles for inspectors or a national understanding of their tasks. Further, the current approach for inspection activities is to monitor school owners’ compliance with laws and regulations. As such, this approach does not address the quality of teaching and learning.

In general, it is not clear to what extent the Directorate systematically monitors and follows up on major outcome measures in the national monitoring system. The *Education Mirror* presents some analysis on the 2007 and 2008 national test results, which shows “that the smallest municipalities with fewer than 2500 inhabitants are falling behind on the tests” (Bonesrønning and Iversen, 2010, in Norwegian Directorate for Education and Training, 2010). While the new requirement for municipalities to draw up an annual status report has been launched with a view to simplifying the municipal reporting task (*i.e.* by offering Template reports with both mandatory and suggested indicators), it is not clear to what extent this information from the completed reports will be systematically reported on or analysed at the national level. Similarly, while there are many examples of municipal networking initiatives and professional sharing of approaches, the national level does not seem to have an overview of different municipal quality assurance systems.

### ***Many municipalities lack evaluation capacity***

During the OECD review, the County Governors reported that there are many smaller municipalities that lack the capacity to develop robust quality assurance systems, to manage these and monitor schools effectively and to follow up with schools accordingly. Indeed, several municipalities do not have a structure in place that allows a solid system for internal control and “are less capable of following up the results of schools” (Norwegian Department of Education and Training, 2011). Further, the background and qualifications of municipal officials responsible for school evaluation vary significantly (Chapter 2).

### ***System-level data are not fully exploited***

While the School Portal offers a rich information system on teacher resources, student results and student enrolment and allows users much flexibility in selection of information, this is still not optimal from a local management perspective. In the School Portal, it is currently not possible for municipalities to have an overview of the indicators aggregated to the municipal level or indeed to show indicators for all schools within a given municipality. Municipal managers would need to extract information by indicator and by school. During the OECD review, some representatives from the municipal level expressed frustration that there is limited access for teachers to discrete areas of the School Portal and that there is not an overview of the school results as a whole. Also, the feedback of results from the national monitoring system is not yet optimal for school and municipal use. During the OECD review, school leaders reported that it would be helpful to have some idea of “benchmarking” or “how good” the results for a particular school are in comparison to national results.

## Policy recommendations

The OECD review team commends the introduction of the national quality system that has provided key national measures on cognitive and non-cognitive outcomes and the basis to improve quality assurance throughout the system. The OECD review team suggests the following potential policy recommendations to both capitalise on and further develop the evaluation of Norwegian primary and secondary education:

- Consider ways to strengthen national measures to monitor improvement;
- Optimise the reporting and use of system-level data;
- Strengthen efforts to both monitor and promote municipal evaluation capacity.

### *Consider ways to strengthen national measures to monitor improvement*

Currently, Norway benefits from its participation in several international assessments to provide information on how learning outcomes in different areas evolve over time. However, Norway could consider ways to capitalise on existing national measures to provide measures of progress against national goals. In particular, the OECD review team sees potential to more fully exploit the national tests to give useful information at the system level. The shift to an electronic format provides a welcome opportunity to revisit the design of the tests.

### *Changes over time*

First, it would be useful to ensure the comparability of results over time by keeping a stable element of items in the tests and releasing only a small proportion of the items for use by teachers after the tests. As such, the OECD review team commends the decision to have the Directorate examine ways to develop the national tests to this end. Importantly, there should be a strategic releasing of items distributed at different difficulty levels and a replacement with new items at the same levels of difficulty. With a stable difficulty level for each test from year to year, national tests results would provide a useful indicator on changes in student performance over time – one which will complement the international trend measures.

This would also be the occasion to review and refine the setting of different performance bands (what is referred to as mastering levels in Norway) in the suite of national tests. With a more stable bank of testing items, it would be possible to set standard performance bands which can be used more meaningfully throughout the system as benchmarks of student performance and improvement.

### *Progress of particular student cohorts through compulsory education*

Second, a more strategic use of the national test results could provide indicators on the progress of particular student cohorts through compulsory education. With the individual student identification numbers, results from the national tests could be linked across cohorts to report on the success of a given cohort on national tests in Years 5, 8 and 9. For example, an annual summative report published by the Ontario Education Quality and Accountability Office in Canada presents overall results in provincial standardised assessments for current cohorts and tracks their progress against their performance in earlier assessments. For example, in the 2010 report, the current Grade 9

cohort's performance in academic and applied mathematics is reported in terms of their progress since the Grade 3 and Grade 6 assessments (see EQAO, 2010). Similarly, on a confidential website, individual reports are generated for each school tracking cohort progress in the provincial assessments. There is a simple reporting of the percentage of students who were either successful or not successful on the current year's test, according to their performance level in the earlier test. "Successful" is commonly defined in each assessment as performance at a given level or above, as student performance is assessed against agreed standards. In this format, results are only presented for the students who sat the assessments at both points in time, *i.e.* if a student in the current Grade 9 cohort did not sit the assessment in Grade 6 his or her performance is not considered in the cohort tracking reports. Given student movements, including new arrivals to the system, descriptive statistics are provided on the absolute number and proportion of students who sat each of the assessments. Further, results and descriptive statistics are presented for the given school, the school board (equivalent to the Norwegian municipalities) and the province (equivalent to the Norwegian counties).

Australia provides an example of building in the measure of progress in the design of the national test measurement scale. A set of standardised national tests in literacy and numeracy was introduced in 2008. The major feature of the National Assessment Plan – Literacy and Numeracy (NAPLAN) tests is the fact that items are linked on a common scale of difficulty to allow documentation of student progression in each of the core areas (reading, writing, language conventions [spelling, grammar and punctuation]) across the four key educational stages that each student sits the test (Years 3, 5, 7 and 9). In this way, it is possible to gauge student progress in the national tests on a subsequent year, for example, it will be possible to see how well a student performs on the common NAPLAN reading scale at four different stages of his or her schooling (in Years 3, 5, 7 and 9). Results from 2010 on will be aggregated to show progress at the state and territory and national levels (for further details see Santiago *et al.*, 2011). As a basis for such consideration, the Norwegian Directorate for Education and Training may want to review and analyse the performance distribution of students on the national tests. Internationally, Denmark shares a similar profile to Norway with the major performance differences observed within schools (*e.g.* OECD 2010). In developing the Danish national tests, a test for a given grade was administered to different grade levels and this revealed striking heterogeneity in student performance within each grade (Wandall, 2010). In such a context, it would be of considerable use to educators to be able to judge student progress on a common scale.

### *Linking information to follow student progress*

As is done in Oslo, the national authorities could explore ways to link information for individual student progress through primary and lower secondary as well as upper secondary. The eventual use of a student identifier in primary and lower secondary education could encourage more longitudinal studies of student progression and transition to upper secondary education. Further, this would allow analysis of earlier educational pathways in identifying success and risk factors for students in upper secondary education.

### ***Optimise the reporting and use of system-level data***

Norway, over a short period of time, has put in place a national monitoring system with new national measures of outcomes (the national tests and the Pupil Survey) and an electronic platform to report and share the results from the system (the School Portal).

The OECD review team commends the Directorate on this strengthening of tools to aid system evaluation. At this stage, the Directorate should devise a strategy to optimise the use of such system-level data by key stakeholders throughout the system, notably the County Governors, municipalities and schools. This should be done in tandem with efforts to secure national tests as a monitor of changes over time (see above) and capitalise on the opportunities offered by administering the national tests electronically.

### *Feedback to municipalities for local monitoring*

The OECD review team commends the Directorate on the School Portal as a tool to make accessible the major results from the national monitoring system. This is an intuitive, easy-to-use system that includes clear documentation on how to interpret the results. Further, the use of different secure access areas for different users offers the possibility to provide a better adapted set of results to each user's needs. While the OECD review team can only access the public areas of the School Portal, feedback from school owners during the review indicates that there may be ways to further capitalise on these particular user access areas within the School Portal. For public school owners, in particular, it is of keen interest to have an easy overview of all indicators for their municipality. Further, there is demand from school owners to see major indicators for all schools within a municipality. Reporting results in a useful format for municipalities would be an effective way to avoid the repetition of basic statistical tasks throughout the system and the Directorate could consult with KS and school owners in designing a suitable reporting format. To encourage the use of such information systems for monitoring progress at the local level, such a system may include some benchmarks set nationally to serve as a springboard for municipalities to set their own local objectives and targets. Within Norway, Oslo and other municipalities demonstrate use of results from the national monitoring system to monitor performance and to set local goals and importantly on how to follow up with schools on these and to ensure schools develop improvement plans. Optimising the provision of national monitoring results for use at the municipal level is a critical step toward securing the effective use of such results for school improvement at the local level. However, the use of such results for improvement depends on type/extent of municipal monitoring, analysis and follow-up, and this may require capacity development (see below).

### *Feedback to schools for self-evaluation and teacher use*

With the suggested strengthening of the national tests as a system level measure (see above), there is also an opportunity to encourage greater use by schools and teachers of the results for improvement. This implies improving the feedback to schools on their performance in the national tests. Chapter 5 provides more details on how national results and analyses could be presented in a more user-friendly way to support the use of data within schools.

### ***Strengthen efforts to both monitor and promote municipal evaluation capacity***

In determining how to prioritise national and county inspections, the OECD review team sees a critical role for the national monitoring system. Both the Directorate and County Governors should systematically monitor municipal performance on key outcome indicators (national tests, Pupil Surveys, final grades and examinations). While there may be some fluctuations among schools and municipalities on final grades and examinations



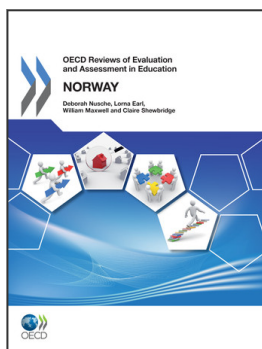
measures, the full-cohort national tests serve in their current format as a robust measure to compare performance relative to other schools and municipalities, and with further development (see above) can serve as indicators of performance changes over time. Careful monitoring of such results can aid investigation into both potential performance concerns and examples of performance improvement. It follows that this would be critical information in prioritising national and county inspections.

The OECD review team suggests a strengthened role for the Directorate in promoting the external evaluation of schools and also sees room to establish regional improvement networks (see Chapter 5). In monitoring and promoting municipal evaluation capacity, the Directorate should evaluate the value and impact of the recent requirement for municipalities to draw up an annual status report. In this context, there is room for the Directorate in collaboration with KS to promote an exchange of different approaches to use and follow-up of results in the reports. For example, the Danish School Agency provides information exchange among municipalities on their different approaches to using the annual municipal quality reports – which have been required since 2006 (see Shewbridge *et al.*, 2011). A national electronic portal provides a central reference point to record different municipal approaches to quality assurance and development. Plus, the Danish School Agency has organised conferences to stimulate municipal exchange and partnerships. At the local government level, Local Government Denmark (KL) ran a two-year partnership involving 37 municipalities which focused on municipal quality assurance as one of three priority areas for development and included use of a suite of key indicators – measured via questionnaires administered to school principals, teachers, parents and students at both the start and end of the partnership – to shed light on the impact of the partnership. Results revealed both a greater focus on results and better use of the mandatory municipal quality reports (see KL, 2009).

The Directorate could also promote and, if necessary further develop in collaboration with KS, the KS competency matrix for employees responsible for education networks. In Ontario, Canada, there is a shared research-based leadership framework for school principals and school district supervisory officers, which was developed collaboratively by the Ministry of Education and professional associations for school principals and school districts. The five major areas for leadership competencies in the framework are: setting directions; building relationships and developing people; developing the organisation; leading the instructional program; and securing accountability (see [www.education-leadership-ontario.ca/content/framework](http://www.education-leadership-ontario.ca/content/framework)).

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