

Chapter 3

Governance of school resource use in Denmark

Resource use can be viewed in terms of the architecture of the school system – how funding flows through different levels of the education administration and different resource categories – but also in terms of the outcomes of schooling. A critical scrutiny of the suitability, effectiveness and efficiency of the resourcing model depends on the availability of systematic knowledge of how well Danish schools work and for whom. The basic question addressed in this chapter is whether there is enough knowledge available to guide policy at a school, local and system level regarding the use of resources and the outcomes for different schools and student groups. The chapter first describes how educational goals are set and how goal achievement is being measured and reported. It then analyses how the use of resources in the pursuit of these educational goals is being governed, managed and evaluated. The chapter highlights the high level of consensus regarding the need for change, the clear targets that have been set to implement reforms, and the tools that have been put in place to monitor goal achievement and to follow up on the implementation of reform. At the same time, it discusses the tension between broad learning goals and narrow measures of learning, and the scope to strengthen both the monitoring of inputs and outcomes of different student groups and of promoting greater excellence among schools and students. The chapter points out the coherence and clarity in the distribution of responsibilities between the different levels of governance, but also the lack of transparency on the use of resources at a local level this implies. The chapter suggests a number of policy recommendations to improve the governance of school resource use.

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.

Context and features

Educational goals and outcomes

Responsibilities for goal development and implementation

As described in Chapters 1 and 2, the Danish *Folkeskole* is embedded in a governance system of three layers – the central state, the municipalities, and schools – and a balance between central authority and local autonomy, between the implementation of national goals and regulations and their adaptation to local needs. The central level governs at a distance and sets central conditions and guidelines within which municipalities and schools exercise their autonomy.

The Ministry for Children, Education and Gender Equality sets the overall framework and objectives for schooling, monitors the quality of education, and ensures that municipalities and schools carry out the government's education policies. Within this central framework, the municipalities set local goals, develop their specific curricular plans and follow up on the results of their schools. Individual schools are responsible for providing education in line with the national aims for the *Folkeskole* and the requirements of their municipality.

Educational goals defined by the Folkeskole Act

The *Folkeskole* Act sets out the general goals of the *Folkeskole*. According to the Act, the *Folkeskole* should provide a broad education that fosters the holistic development of students as independent individuals and that develops students' awareness, imagination and confidence in their own abilities. In partnership with parents, the *Folkeskole* should provide students with the knowledge and skills that will prepare them for further education, training and learning, and for their role as citizens in a democratic society. Each school is responsible for ensuring the quality of education in accordance with the general goals of the *Folkeskole*, and students and parents are to work together with the school towards realising the aims of the *Folkeskole*.

The 'Common Objectives' for student learning

All public municipal primary and lower secondary schools share a set of binding learning progressions, achievement targets and curricular guidelines, the so-called Common Objectives. Common Objectives were introduced in 2003 and specify the purpose of the different subjects, the objectives to be met by the end of compulsory education in the Year 9 leaving examination, the objectives for different year levels, and a guiding curriculum for all subjects. Common Objectives specify the knowledge and skills of students that teaching should lead to. However, while the Common Objectives provide descriptions of how objectives can be reached, and while schools have to include learning and achievements targets in their curricula, there is no tight curriculum at the national level.

In 2014, the Common Objectives were reduced and simplified as part of the *Folkeskole* reform to ensure that learning objectives focus on learning outcomes rather than the content

of instruction (see further below). This is intended to help school principals, teachers, parents, students and school boards to better understand the objectives so they can be an active partner in the learning process, and to assist schools and teachers to move towards a more goal-oriented approach to teaching and learning (Houlberg et al., 2016). In connection with this process, the curriculum document for Year 0 (the pre-school class) was also changed, setting explicit goals for students. This aims to further strengthen the development of crucial skills in Year 0 and improving their readiness for benefiting from the instruction in subjects from Year 1.

The change towards a clearer goal-orientation in the Common Objectives is also intended to provide a stronger and more precise basis for evaluation and assessment by teachers of their students' progression in relation to the learning goals. To further this intention, concrete guidance for evaluation in relation to all learning goals (including specific examples) were made available to teachers together with the Common Objectives at a web portal (www.emu.dk), which is to function as a "knowledge portal", providing guidance and inspiration for working with the Common Objectives. The portal also offers suggestions for concrete teaching modules and activities. These tools are intended to support a shared understanding of goal-oriented instruction and assessment, thus helping teachers to work with the Common Objectives in a more qualified way.

Goals set as part of the 2014 Folkeskole reform

Beyond the general goals of the education system set out in the *Folkeskole Act*, recent reforms established more specific goals and related measurable targets and objectives to monitor the performance of the education system. Most notably, as part of 2014 *Folkeskole* reform, the government set three national goals that should contribute to setting a clear direction and a high level of ambition for the development of the *Folkeskole* while ensuring a clear framework for a systematic and continuous evaluation:

- The *Folkeskole* must challenge all students to reach their full potential.
- The *Folkeskole* must lower the significance of social background on academic results.
- Trust in the *Folkeskole* and student wellbeing must be enhanced through respect for professional knowledge and practice in the *Folkeskole*.

These three national goals for the development of the *Folkeskole* are operationalised through a number of clear, simple and measurable targets:

- At least 80% of students must achieve "good" results (mark 3 or higher) at reading and mathematics in the national assessments. The baseline is the share of students achieving mark 3 or higher in the national assessments in 2012.¹
- The number of high-performing students in Danish and mathematics must increase from year to year. The baseline is the percentage of students achieving the top mark 5 in the national assessments in 2012.²
- The number of low-performing students in reading and mathematics, independent of social background, must decrease from year to year. This target should focus on the percentage of students with parents with only compulsory or unknown education performing poorly in the national assessments.³
- The wellbeing of students as measured by a national survey must increase.⁴

The targets are measurable on national, municipal, school and class levels and are envisaged to become the basis for dialogue and follow-up regarding the development of

students' academic performance and wellbeing at all levels. To fulfil the three national goals, the *Folkeskole* reform focuses broadly on three main areas of improvement, as described in Chapter 1: a longer and varied school day with more and improved teaching and learning; better professional development of teachers, pedagogical staff and school principals; and few and clear objectives and simplification of rules and regulations.

Goal-setting at the municipal and school level

Within the framework provided by national goals and the Common Objectives, municipalities define the goals and scope for the activities of their schools. The school leader is responsible, both administratively and pedagogically, for the school activities in relation to both the objectives and policies imposed by the municipal council and the principles set out by the school boards. Given the decentralised approach to schooling in Denmark, there are variations in the degree to which municipalities set local goals and hold their schools accountable for the achievement of these goals.

School leaders, in collaboration with the school boards, define the strategy for their school and may set more specific school-level goals. In a survey of Danish school leaders, Pedersen et al. (2011) found that most schools had developed goals or values for the wellbeing of their students (91%), the schools' educational performance (71%) and attainment targets for various subjects (74%). The study also found that larger schools typically devoted more attention to documentation and were working more intensely with written goals and evaluation and assessment of goal-achievement. Schools in more challenging socio-economic circumstances were more likely to develop their own performance goals that differed from national and municipal goals. These schools typically focused less on performance goals and more on other educational and social goals.

Wiedemann (2012) studied how Danish teachers responded to the Common Objectives. Based on focus group interviews at nine schools, the study finds a variation of teacher responses to the central steering through Common Objectives. While some teachers felt their professional identity reinforced through the visible demands for achievement set by the Common Objectives, others experienced the introduction of these central objectives as a form of de-professionalisation and de-valorisation of their professional judgments. Teachers who had participated in the implementation process had a more positive view of the Common Objectives. In a study on the effects of school autonomy in Denmark, Calmar Andersen and Winter (2011) found that school autonomy in goal-setting, and planning and choosing teaching methods in line with these goals, had beneficial effects for student performance.

The 2014 *Folkeskole* reform further emphasises the importance of goal-oriented teaching. In particular, a focus on setting "visible learning goals" had been very much taken on board in all the municipalities and schools visited by the OECD review team. Teachers reported paying more attention to sharing and co-constructing learning goals together with their students and making goals explicit, for example at the start of every lesson.

Processes to measure goal achievement

Over the last decade, and especially with the revisions of the *Folkeskole* Act in 2006 and in 2014, Denmark has implemented a range of measures to stimulate a culture of evaluation and assessment in the *Folkeskole* and to increase the collection and use of data at the different levels of the education system (also see Chapter 1). This includes the

introduction of national student assessments, the establishment of a requirement for municipalities to produce quality reports, and the creation of national bodies to monitor and evaluate the quality of education (Shewbridge et al., 2011).

Measuring student learning outcomes

Traditionally, student assessment in Denmark has been the responsibility of schools and teachers, but a number of central measures have influenced assessment practice over the years. Since 1993, teachers have been required by law to ensure a continuous assessment of student learning. With the introduction of the Common Objectives in 2003, schools and teachers have had a common basis for their assessments through learning goals for the different years and subjects as well as the end of the *Folkeskole* in Year 9. Since 2006, schools and teachers are also required to develop individual student plans as a tool to systematically monitor and improve students' learning outcomes. Teachers have to establish a learning plan for each of their students, describing the student's current performance level and specifying areas on which the student, parents and the teacher will focus on over the coming months. Student learning plans need to be shared with parents at least once a year.

At the end of the *Folkeskole* in Year 9, students are required to sit a mandatory school leaving examination, and in Year 10, students can choose to take an optional examination. Municipalities and schools are required to publish results from the Year 9 school-leaving examinations by law through the Act on Transparency and Openness (Act no. 414 of 06/06/2002). The same act obliges schools to publish performance indicators such as average marks, transition frequencies to further education and results of evaluations conducted by the school. The publication of examination and assessment results has led to a public debate about the utility of such data as an indicator for school quality (Houlberg et al., 2016; Shewbridge et al., 2011).

In 2007, national assessments for different subjects in Years 2, 3, 4, 6, 7 and 8 were introduced to provide teachers with a better general assessment of students' learning progress and to follow up on students' attainment of the learning goals specified in the Common Objectives.⁵ Since 2010, participation in national assessments has been compulsory for schools and teachers. The average results of Danish students in national assessments are published in the form of national profiles, but individual student results as well as the average results for schools and municipalities are confidential (for more information, see Box 3.1).

Box 3.1. Availability of results of national assessments in Denmark: who has access to the results?

Information on assessment results for individual students, groups of students, classes, schools and municipalities is to be kept confidential. Individual students, their parents and their teachers have access to information about individual student assessment result. Individual student assessment results are not shared with other teachers, except in specific cases such as join teaching. School principals have information about the average assessment results of their school in each assessment, the average results of each class and school data adjusted for socio-economic factors. Municipalities have information about the average mark of the schools in the municipality and the average results for each school as well as data for each school adjusted for socio-economic factors. At the national level, the national average test result for all schools together is published and available to the public.

Box 3.1. Availability of results of national assessments in Denmark: who has access to the results? (cont.)

This implies that different stakeholders can compare themselves against the national average, but benchmarking towards other schools or municipalities is not possible, i.e. municipalities cannot benchmark themselves against other municipalities, school principals cannot compare themselves to other schools and parents cannot compare different schools' average test results. Consequently, students, parents and teachers can use assessment results to follow an individual student's acquisition of knowledge and skills, and municipalities and schools can use the results to compare themselves against the national average and to aid decision-making, but results cannot be used as a basis for systematic benchmarking and sharing of best practice among different schools and municipalities or for ranking municipalities or schools (Houlberg et al., 2016).

This policy of confidentiality of assessment reflects the intended purpose of the national assessments. The national assessments were conceived i) to provide a pedagogical tool for teachers against testable areas of the Common Objectives; and ii) to provide a tool for monitoring national progress over time through a national performance profile showing national average test results and to enable municipalities to monitor their schools against this national profile. A previous OECD review of evaluation and assessment in education for Denmark analysed the question of transparency of the results from national assessments. It highlighted the importance of not compromising the reliability of the national assessments as a monitoring tool and the potential of the national assessments as a pedagogical tool. The OECD review encouraged Denmark to further support and promote the capacity of stakeholders to use national test results effectively in schools and municipalities. It also provided an analysis of the government's plans at the time of the review in 2010 to publish results the school level for greater accountability suggesting that such a step was premature at the time. It pointed out that private schools were allowed to opt out of national assessments, arguing that, if used for accountability purposes, private schools should be held accountable the same way – especially given the increase in the number of private schools offering compulsory education (Shewbridge et al., 2011).

Recent OECD work on governance and accountability in complex education systems and evaluation and assessment in education provide a broader context about the use of national assessment results for accountability. School performance accountability is a good tool for output steering as it enables central governments to monitor and control the quality of education, to steer schools and school governing boards based on their performance, and to make relatively objective and unambiguous comparisons between schools. The shift to school performance accountability has, therefore, been an important step in ensuring quality control and effective steering of decentralised systems and school performance accountability. The setting of national standards is now commonly used in a majority of OECD countries. However, school performance accountability is not a cure-all solution when it comes to securing the quality of education in a broad and comprehensive sense (Hooge, 2016). Indeed, analyses from the OECD PISA 2012 make it clear that simply making school achievement data public is not correlated with better student outcomes (Blanchenay and Burns, 2016).

School performance accountability systems entail a number of caveats. Essential elements of the quality of education are not so easy to measure, such as socialisation, general knowledge, integration, and personal development. Research has identified a number of unintended effects of school performance accountability: impoverishing the teaching and learning processes as a result of “teaching to the test”; narrowing the curriculum to focus on those elements that are tested emphasising failure instead of learning or improvement if

Box 3.1. **Availability of results of national assessments in Denmark: who has access to the results?** (cont.)

performance accountability lacks positive interventions designed to assist and support low-performing schools; and reducing the quality of staff in schools serving low-performing students. The higher the stakes are for school leaders and teachers, the more these unintended effects are likely to occur. Using results from national assessments for accountability purposes, then, requires transparency and fairness to mitigate the negative effects on teaching and learning and to reduce the misuse of results (Hooge, 2016; OECD, 2013b). The availability of performance data to a broader range of stakeholders for the purpose of transparency and accountability, furthermore, carries an underlying equity issue as different actors may be able to use the available data to different degrees. In most countries, middle-class parents are more likely than parents with lower socio-economic status to use school achievement and performance data to place their child in the best-performing schools and to lobby successfully for change in the system.

The availability of data per se then, is not a stand-alone solution to information asymmetries between stakeholders, and can in fact increase the complexity involved in their interactions (Blanchenay and Burns, 2016). While not a panacea itself and possibly leading to other unintended consequences, expanding school performance accountability to encompass a multiple school accountability approach can be a promising option for a central government searching for a holistic view of educational quality. Such an approach involves horizontal accountability to multiple stakeholders, including students, parents and the community, for multiple aspects of schooling based on various sources of information, including process-oriented measurements (Hooge, 2016).

Source: Blanchenay, P. and T. Burns (2016), "Policy experimentation in complex education systems", in *Governing Education in a Complex World*, <http://dx.doi.org/10.1787/9789264255364-10-en>; Hooge, E. (2016), "Making multiple school accountability work", in *Governing Education in a Complex World*, <http://dx.doi.org/10.1787/9789264255364-7-en>; Houlberg, K. et al. (2016), *OECD Review of Policies to Improve the Effectiveness of Resource Use in Schools: Country Background Report for Denmark*, www.oecd.org/edu/school/10932_OECD%20Country%20Background%20Report%20Denmark.pdf; OECD (2013b), *Synergies for Better Learning: An International Perspective on Evaluation and Assessment*, <http://dx.doi.org/10.1787/9789264190658-en>; Shewbridge, C. et al. (2011), *OECD Reviews of Evaluation and Assessment in Education: Denmark 2011*, <http://dx.doi.org/10.1787/9789264116597-en>.

Evaluation of municipalities and schools

In 2006, Denmark introduced the requirement for municipalities to produce annual quality reports. Since the 2014 *Folkeskole* reform, these reports have been required on a biannual basis. Quality reports seek to further the co-operation between local politicians, local authorities and schools and aim to contribute to transparency as they are made public. In their quality reports, municipalities must describe their schools' quality of education, the measures the municipal board has taken to evaluate the quality of education, and the steps the municipal board has taken in response to the previous quality report. As part of the 2014 *Folkeskole* reform, special emphasis was put on ensuring that quality reports focus less on input factors and more on outcome information. Quality reports should be based on data available from a national data warehouse (more on this below) and refer to a number of indicators such as the number of teachers with teaching competencies in the subjects they teach, results regarding academic performance and wellbeing in relation to the indicators set in the 2014 *Folkeskole* reform, average marks correlated for socio-economic background, transition rates to upper secondary education and inclusion rates for students with special educational needs. In line with the policy of keeping results from national student assessments confidential at the level of municipalities and schools, the quality reports do

not make available results from national assessments. For monitoring purposes, the quality reports can, however, disclose information whether the municipality or individual schools meet their performance targets and how performance develops over time.

The external evaluation of public schools is the responsibility of the municipalities, and practices vary across Denmark. The six municipalities visited by the OECD review team all reported having procedures in place to ensure the quality control of their schools. This typically involves annual meetings with school leaders to discuss student results, based on national and municipal assessments and surveys of students and/or school staff. Some municipalities reported to employ specialists working with schools around assessment data or experts in the core subjects to help school leaders devise strategies for improvement. One of the municipalities conducted regular quality visits at its schools involving the observation and review of teachers' classroom practices, followed by the development of a capacity development plan for the school. While all the municipalities and schools visited by the OECD review team affirmed having a lot of data at their disposal, they expressed facing challenges in using this data to formulate strategies and improve results (more on this below). The OECD 2012 Programme for International Student Assessment (PISA) provides some information about the use of assessment data at administrative levels as reported by school principals. According to these data, 69.9% of students were in a school whose principal reported that an administrative authority tracked achievement data over time (OECD average: 72.1%) (OECD, 2013a).

School boards also play a role in evaluating school quality and holding school leaders accountable for results. School boards typically comprise five to seven parent representatives, two teacher representatives and two student representatives elected by their peers. It is part of the school boards' role to set principles and long-term goals for the school and to follow up on school budgets, policies and results. The Danish national parents' organisation supports school boards in these tasks and has received dedicated funding for this type of support with the 2014 *Folkeskole* reform. However, the degree to which school boards confront school leaders and get involved with monitoring school results varies across schools. Some of the school board representatives interviewed by the OECD review team reported that they had become more involved with monitoring school results since the 2014 *Folkeskole* reform.

The national level also monitors school quality from a distance. In April 2015, the Agency for Education and Quality (*Styrelsen for Undervisning og Kvalitet*) was created to replace the former Quality and Supervision Agency (*Kvalitets- og Tilsynsstyrelsen*). The new agency is responsible for the quality supervision for the *Folkeskole*. This includes supporting quality and capacity development activities in areas such as the new learning consultant corps, including consultants working with inclusion and bilingual children as well as international supervisors, and the development and operation of assessments and examinations. National supervision comprises a regular monitoring of the data available in the data warehouse (see below) and further screening and follow-up with those schools that are considered "at risk" based on these indicators. If there is evidence of consistent underperformance in a particular school or municipality over several years, the national level can oblige the municipality to work with the national learning consultants in order to develop improvement strategies.

Evaluation at the system level

For evaluation of compulsory education as a whole, Denmark has traditionally been reliant on information provided via international assessments such as the OECD PISA. But

results from such external surveys have led to increased demands for national information on the school system. Since 2006, significant efforts have been made to produce such information, most notably through the publication of results from the mandatory school-leaving examinations in Year 9 by schools and municipalities, as well as the publication of “national profiles” showing average results from the national assessments designed to measure progress over time (Shewbridge et al., 2011). National information on student performance is typically contextualised with information about the performance of Danish students in international assessments.

Following the introduction of national performance targets as part of the *Folkeskole* reform in 2014, which include a target related to student wellbeing, a national survey on student wellbeing (*National måling af elevers trivsel*) has been developed and implemented for the first time in March 2015. This constitutes a major step in going beyond the measurement of basic academic skills and ensuring that broader aims of the *Folkeskole* related to the wellbeing of students are monitored. Results are intended to inform municipalities, schools, principals, teachers, parents and students and to provide a basis for discussions and initiatives enhancing students’ wellbeing (see Box 3.2).

Box 3.2. The Danish national survey on student wellbeing

While individual student results are confidential, teachers, school management, the school board, and the municipality have access to all class results so they can collectively support further work on wellbeing. For anonymity, answer distributions for classes with fewer than five students are not available. For schools, the results of the wellbeing survey form the basis for developing a systematic approach to students’ wellbeing at school as a whole and in each class. Teachers present results to the students in their class and teachers or principals present results to parents. For municipalities, the results must be part of the quality reports, i.e. what is the state of student wellbeing in the schools of the municipality and what does the municipality do to follow up on results and promote wellbeing. For more information in Danish, see www.uvm.dk/Den-nye-Folkeskole/En-laengere-og-mere-varieret-skoledag/Trivsel-og-undervisningsmiljoe/National-maaling-af-elevers-trivsel.

Source: Danish Ministry for Children, Education and Gender Equality (2016b), *Trivselsmåling* [National Wellbeing Survey], www.uvm.dk/Uddannelser/Folkeskolen/Elevplaner-nationale-test-og-trivselsmaaling/Trivselsmaaling.

Denmark also makes use of special thematic evaluations or studies to bring more information at the system level. The school council decides on national large-scale evaluations to be conducted in compulsory education. These include major evaluations of national initiatives that are conducted by the Danish Evaluation Institute (EVA) and other partners.

The data warehouse

As part of the 2014 *Folkeskole* reform, growing emphasis has been placed on data collection, analysis and evaluation. A new data warehouse (www.uddannelsesstatistik.dk) has been gradually developed since 2013 by the National Agency for IT and Learning of the Ministry for Children, Education and Gender Equality to monitor key aspects of basic education. This data warehouse is envisaged to fully replace the previous public database of education statistics (*Databanken*). Key purposes of this system are to promote data-driven approaches at the level of schools, municipalities and the Ministry for Children, Education and Gender Equality and to allow the analysis of data in relation to the national goals of the

Folkeskole reform. The information in the data warehouse is also available to the public with the exception of confidential data on results from national assessments at the level of individual schools and municipalities.

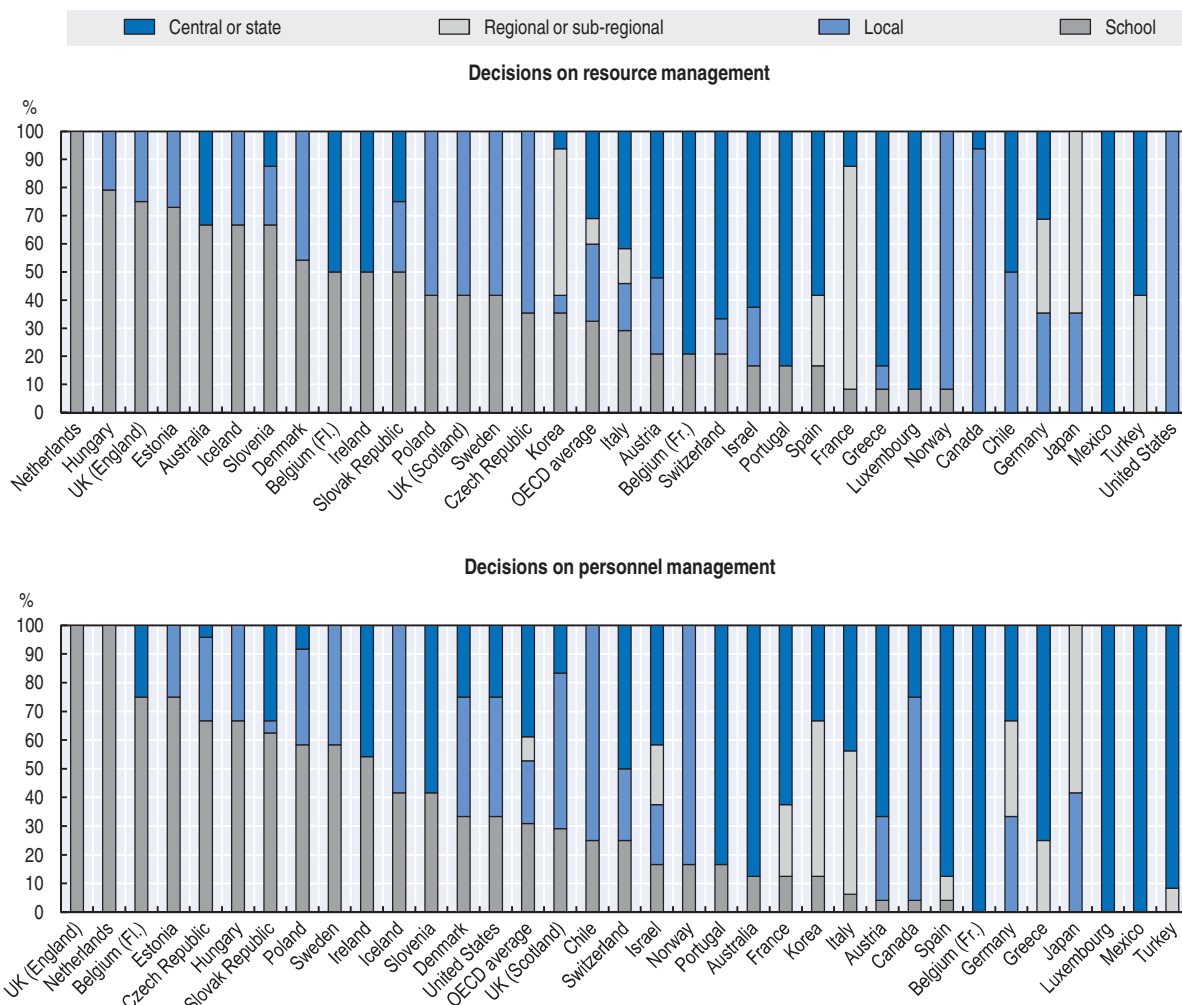
At the time of the OECD review visit in April 2015, the data warehouse included information on the *Folkeskole* sector, but it was foreseen to integrate information on private basic education as well. By the time of drafting the report, the system had been extended to youth education and adult education. The intention is to bring together data from different sources in a single location to allow policymakers and stakeholders at different levels of the system to access information easily for evaluation and planning purposes. Municipalities and schools are required to enter specific information into the data warehouse.

At the time of the OECD review visit, the data warehouse encompassed 35 indicators to monitor basic education. These included: examination results, national test results, results from student wellbeing surveys and transition rates to youth education. Since the results from the national tests are confidential, schools and municipalities have to log in to see their own results on these tests. The data warehouse also provides information on inclusion (number of students in special schools or classes), student absences, and annual expenditure per student. With respect to human resources, it includes information on teacher competencies, based on information entered by teachers regarding their formal education. There are plans to further broaden the information on human resources in schools and to also include information on the number of lessons received by students.

It is mandatory for municipalities to draw on the data included in the data warehouse to prepare their biannual quality reports. The data warehouse system appears to be particularly useful for smaller municipalities which may have little capacity to organise their own data collection and analysis. The system includes a function for schools to generate a statistical and quality report based on data for their own school. School leaders and teachers are encouraged to use the information from the data warehouse, for example in quality discussions with their municipal educational administration. The data warehouse is complemented by an online knowledge portal (www.emu.dk), which provides more qualitative information for schools. It describes the Common Objectives and reform goals and makes available examples of teaching and learning materials that can be helpful for stakeholders in reaching the goals (see above).

Management and monitoring of school resources

In Denmark's decentralised school system, most financial and personnel management decisions are taken at the local and school level. Figure 3.1 presents results from data collected across OECD countries in 2011 on decision making at the lower secondary level of education. In Denmark, the school level made 54% of resource management decisions and the local level made the remaining 46% of such decisions. This domain of decision-making includes the allocation and use of resources for teaching staff, non-teaching staff, capital and operating expenditure, and professional development of principals and teachers. With respect to personnel management, 25% of the decisions were made at the central level, 42% were made at the local level and 33% were made at the school level. This domain of decision-making includes the hiring and dismissal of principals, teaching and non-teaching staff; duties and conditions of service of staff; salary scales of staff; and influence over the careers of staff (OECD, 2012).

Figure 3.1. **Decisions taken at each level of government in public lower secondary education, 2011**

Note: For each domain, countries are ranked in descending order of the percentage of decisions taken at the school level.

Source: OECD (2012), *Education at a Glance 2012: OECD Indicators*, <http://dx.doi.org/10.1787/eag-2012-en>, Table D6.2a and D6.2b.

Resource management, accountability and reporting at the local level

As described in Chapters 1 and 2, the municipalities provide most of the services of the welfare state including compulsory education. The *Folkeskole* is almost exclusively financed by the unconditional block grant from the central government in addition to local taxes. There are very few earmarked grants to the *Folkeskole* and they typically concern relatively small amounts compared to the overall spending level in schools. The intended utilisation of such specific grants is laid down in annual agreements between Local Government Denmark (KL/LGDK) and the central government. As long as national framework laws are respected, the Ministry for Children, Education and Gender Equality does not get involved in monitoring municipality budgets.

With the 2014 *Folkeskole* reform, however, there has been a deliberate emphasis on monitoring the use of specific grants by the municipalities. For example, the utilisation of earmarked funding for teacher competency development is managed at the municipal level, but municipalities are required to report in an accounting system their levels of

spending on formal teacher education. In 2020, the Ministry for Children, Education and Gender Equality plans to evaluate how municipalities have spent the funding destined for teacher competency development and to reclaim any parts of the funding that were not used for this purpose.

The Ministry of Social Affairs and the Interior manages a system for monitoring municipal performance (*Nøgletal* [Key figures]). The system makes available data that describe social conditions, economic background, local financial data, and outputs for municipalities and regions (Mizell, 2008). Information is kept at a relatively general level to avoid excessive bureaucratisation. It includes information on per student expenditure, the number of primary and lower secondary schools, the number of regular classes, average school and class size, expenditure on private schools and continuation schools (*Efterskole*), and the proportion of students in private schools relative to the number of students in the *Folkeskole*. It allows comparing basic financial indicators such as expenditure per student across municipalities, but, as reported during the review team's interviews, comparisons based on this system are not always easy to make as there are differences across municipalities in how expenditure is reported. For example, some staff categories are counted as local level employees in some municipalities and as school employees in others. The Ministry of Finance may also prepare ad hoc analyses to benchmark municipalities on certain areas of spending.

In addition, since the 2007 structural reform, the municipalities have been developing a common business management system for all Danish municipalities (*Fælleskommunal ledelsesinformationsystem*, FLIS [Joint Municipal Information System]). The development of this system was intended to enhance the transparency and accountability of municipal decision-making in the new governance context following the 2007 structural reform (Chapter 1). The system has been operational since 2013 and collects both financial and administrative information from the individual municipalities, thus providing the possibility to compare indicators across municipalities. It covers key service areas for which the municipalities are responsible (schools, eldercare and social services). The data for health and employment were being implemented in the system at the time of drafting the report. Regarding the school sector, the system includes information on aspects such as: spending per student, school size, class size, teachers' age, teachers' salaries, inclusion, and student characteristics (such as age, gender and ethnic background). The data can be viewed for individual municipalities.

While the system provides information on key input variables, it does not include outcome information from the national tests. Representatives from LGDK reported that the intention is to further develop the system into a data hub, which would allow making connections between national goals and local leadership decisions. This would help LGDK and/or individual municipalities in conducting their own analyses and evaluations of relationships between inputs and outcomes. The data are not accessible to the general public or the Ministry for Children, Education and Gender Equality. LGDK uses and selectively publishes the data for political dialogue and for conferences, such as the national conferences for mayors and economic committees of the municipalities organised by LGDK on a regular basis.

Resource management, accountability and reporting at the school level

As described in Chapter 2, the municipalities have different funding formulas to calculate the amount of funding allocated to each of their schools. Schools are typically informed of the budget for the next year several months in advance and they can start planning the budget for the next school year at the beginning of the calendar year. As

student numbers influence the school budget, there may be variations from year to year due to fluctuations in student numbers. In one municipality, it was reported that in case of an unexpected decline in student numbers, schools had the possibility to apply for flexible funding from the municipalities' social services. School boards may meet with local politicians and comment on local budget proposals.

In most schools, the school leader prepares the school budget with input from the teaching staff and presents it to the school board. By law, it is the role of the school board to hold the school leader accountable and make the final decision on the school budget. However, according to the national parents' organisation, school boards are not always well informed of their rights and their involvement in determining the school budget varies across schools. In all schools visited by the OECD review team, the school boards were informed of the budget, but there were variations in the degree to which they felt in a position to question and influence the budget and strategy of the school. As part of the 2014 *Folkeskole* reform, the national parents' association received DKK 12 million to raise the competencies and professionalism of the school boards to strengthen democratic involvement of stakeholders and horizontal accountability at the school level.

School leaders, in consultation with their school boards, have wide-reaching autonomy in the use of the resources they receive. In their decisions on the allocation of funding, they are mainly restricted by national regulations about class size, hours to be taught by subject and students' right to receive teaching in accordance with their needs. School leaders need to recruit teaching staff with the relevant competencies and specialisations to fulfil these aims and the largest part of school budgets is dedicated to salaries for staff. School leaders interviewed by the OECD review team reported that they were facing increased reporting obligations since the 2014 *Folkeskole* reform, as there was increased national monitoring of their compliance with national regulations, such as the number of lessons students receive in Danish and mathematics, the number of lessons cancelled, the background of substitute teachers and the degree to which teachers are specialised in the subjects they teach.

Based on the interviews conducted during the review visit, the OECD review team formed the impression that, in line with the Danish focus on school autonomy, municipalities do not monitor the allocation of funding to different budget lines by the school leaders. However, they appeared to monitor closely that schools operate within their allocated budget and follow up with school leaders in case of financial problems. Municipalities may also offer accounting support to their schools, so that school leaders can focus on the less technical and more strategic aspects of budgeting. In one of the municipalities visited by the OECD review team, there was an approach by which all school leaders were jointly following the budgets for all schools in the municipality. There was a regular dialogue between municipal staff and all school leaders on their spending, which also made it easier for the municipality to shift resources between schools when necessary.

According to Houlberg et al. (2016), little information is available at a system level regarding the capacity for effective resource management at the local and school level and there are no central initiatives to build up a knowledge base and disseminate good practice in this area among schools and municipalities. This is linked to the decentralised approach to resource management in Denmark that leaves the responsibility for developing and implementing approaches to budgeting and accounting to the municipalities and schools.

Strengths

There is a high level of consensus regarding the need for change

High performing school systems typically set clear objectives for their education system, ensure that there are the right institutions to deliver, engage stakeholders in the process, and find the right balance between central and local direction, while at the same time ensuring that financial, material and human resources are aligned to the objectives (OECD, 2015). Successful governance hinges on stakeholders having adequate knowledge of educational policy goals and their consequences, on their ownership and willingness to effect change, and the tools to implement a reform as planned (Burns and Cerna, 2016). As will be discussed in more detail below, with the implementation of the 2014 *Folkeskole* reform, Denmark has been able to realise many of these elements of successful educational governance and steering. This is supported by the broad agreement of all the major political parties on the reform, the annual negotiations between the government and the municipalities, annual discussions in the individual municipal councils and the involvement of key stakeholder groups in designing, implementing and monitoring the reform.

The OECD review team was impressed by the ability of the Danish school system to build consensus around the need for change and to implement a wide-reaching reform of the school system, supported by a broad partnership involving several ministries at the central level and the representative organisations of municipalities, school leaders, parents and students. Although the individual teachers and the teachers' representative organisations interviewed by the OECD review team voiced strong concerns about the introduction of a new framework for the utilisation of teachers' working hours (Act no. 409) which preceded the reform of the *Folkeskole*, they also expressed their support for the overall aims and principles of the *Folkeskole* reform itself. It should be noted that the Danish school system is witnessing a period of major change, characterised not only by the 2014 *Folkeskole* reform but also by parallel ongoing changes related to the inclusion of students with special educational needs and the initial education of teachers. Despite the challenges all actors are confronted with in such a major change process, there appeared to be wide agreement among the main groups in the system that these changes were necessary to work towards the improvement of the education system.

There are clear national targets for the school system to guide decentralised spending

In a school system relying on decentralised management of resources, establishing a small number of clear, prioritised and measurable goals that can drive the system is key to guiding education policy improvement (OECD, 2015). In recent years, Denmark has put a major emphasis on ensuring that reforms are introduced along with clear goals and targets. This outcome-oriented approach to designing and implementing reforms was described by policy makers and stakeholders as a new way of educational steering in Denmark, which has the potential to create greater transparency and a sense of common purpose within a highly decentralised school system. There is a clear intention to make sure that the central goals for reform implementation are also translated into concrete targets at the local and school level. In line with this intention, evaluation and reporting mechanisms have been introduced to monitor progress towards these goals at the central, municipal and school level (see next sub-section).

The most notable example of this goal-oriented approach is the 2014 *Folkeskole* reform with its three core objectives for student achievement, equity and wellbeing, which are

broken down into a range of measurable indicators. These indicators are monitored for every school and the relevant progress information is provided to each municipality. Based on the interviews conducted in Denmark, the OECD review team formed the impression that these goals were well understood and supported by all stakeholder groups. Similarly, the 2012 inclusion reform set the clear target of an overall inclusion rate of 96% by 2015. This target provided a common objective for actors at all levels and appeared to have been taken on board by municipalities and schools for their local educational planning.

Another noteworthy example is the government's policy for teacher competency development and specialisation, which is part of the 2014 Folkeskole reform. The government formulated the quantitative target that 95% of teachers in Denmark should be certified in all the subjects that they teach by 2020. As mid-term objectives, this certification goal should be achieved for 85% of teachers in 2016 and for 90% of teachers by 2018. To facilitate goal achievement, the Ministry for Children, Education and Gender Equality has made available additional funding of DKK 1 billion for teacher competency development along with evidence-based recommendations on how this funding could be spent. Municipalities applying for this funding are required to develop a plan for the use of this funding and to report back on their progress. By 2020, any unspent money from this fund will have to be repaid by the municipalities to the Ministry for Children, Education and Gender Equality.

Denmark has developed a range of tools to monitor goal achievement and follow up on reform implementation

As described above, Denmark has made available an increasing range of tools in order to monitor goal achievement and measure the impact of changes in policy and practice. Key instruments include the national tests, the calculation of “expected” exam grades for all students, the national wellbeing survey, and the recently developed survey to monitor the effect of inclusion on wellbeing (following 10 000 students in “included” classrooms). The use of the results from these measurements is being facilitated by increasingly user friendly mechanisms for actors at all levels to access the data. In particular, the new data warehouse is a key tool facilitating the follow-up of initiatives and providing access to steering and performance data for schools and municipalities. According to Simola et al. (2011), the increasing circulation of data in the Danish education system helps provide a shared agenda through which stakeholders with different interests are brought together to discuss and interpret the information communicated to them.

In addition, a number of arrangements have been made to monitor the implementation of the 2014 Folkeskole reform on an ongoing basis. There is a steering group composed of different parties including the Ministry for Children, Education and Gender Equality, the Ministry of Finance and LGDK, which used to initially meet every six weeks and was meeting three times a year at the time of drafting the report to follow up on the implementation of the reform. In addition, a research and evaluation programme regarding the reform has been set up with the aim to: provide a basis for actors at all levels of the management chain to learn from experiences and results (how the reform is implemented and what works best); document the implementation and effect of the reform overall and of its most important initiatives; and strengthen the empirical research on school leadership, teaching and learning. LGDK conduct surveys on the implementation among municipalities twice a year. Finally, results of the reform are also documented in a yearly status report prepared by the Ministry for Children, Education and Gender Equality and in the digitally supported quality

reports of the municipalities. These steering and monitoring functions were built into the reform from the outset to allow further analyses and adequate responses in case the set targets are not met.

There are also a range of initiatives developed by stakeholder groups to evaluate the impact of the reform on their members and identify any potential negative effects. For example, the Danish Union of Teachers (DLF) reported to the OECD review team that it was monitoring the reform's implementation through information collected from their school representatives and local branches, as well as through questionnaires and national surveys. The Danish Union of Early Childhood and Youth Educators (BUPL) also developed a survey for their members regarding the impact of the reform. This also responds to concerns among its members that the national evaluation of the reform may not sufficiently evaluate the wellbeing of the professionals working in schools, an important aspect of measuring the success of the reform.

There is coherence and clarity in terms of the respective responsibilities for the central and local level

The Danish approach to resource management reflects a system based on trust, local autonomy and horizontal accountability, where the respective responsibilities of each level are clearly defined.

School autonomy provides good conditions for effective management of resources

Governance arrangements in Denmark combine a focus on clear central goals and targets with financial decentralisation and autonomy. Resource allocation decisions are based on principles of autonomy and devolution of decision-making to schools. The fact that the largest part of school funding is not earmarked gives municipalities and schools the necessary flexibility to use funding to fit their own needs. It allows schools to make critical decisions that they are best placed to meet, for example regarding the recruitment of teachers, the organisation of the curriculum and the planning of extracurricular activities. The school leaders' responsibility for budget development is likely to promote their ownership of the budget and provides scope to set local priorities in budget decisions.

There is local accountability and support for schools in resource management

At the same time, there are mechanisms to ensure that Danish school leaders do not make resource management decisions in isolation. As described above, there is involvement of local stakeholders in budget decisions via the work of the school boards. Although their level of involvement varies across schools, school boards have a formal role in monitoring results and approving school budgets, thereby offering a degree of horizontal accountability to school-based resource management. The 2014 Folkeskole reform provided DKK 12 million for the national parents' association to raise the competencies and professionalism of the school boards. In addition, the municipal education offices provide their school leaders with various degrees of help with the more technical aspects of school budgeting such as accounting and bookkeeping, allowing school leaders to focus more on strategic and pedagogical organisation of the school. The municipalities also play an important role in the delivery of services and can help their schools achieve scale economies, for example by buying materials and services for several schools at the same time.

Supervision and support for the municipalities is available

As described above, the quality reports prepared by the municipalities provide a tool for goal-oriented management of the local school systems, horizontal accountability and central supervision of schools. As part of the 2014 *Folkeskole* reform there has been a new approach to the central supervision of municipalities, with a clear ambition to reduce bureaucracy and paperwork: municipal quality reports are now only required on a biannual basis and they should rely primarily on data that are available in the data warehouse. Based on these data, the central level monitors progress towards the reform goals and follows up in cases of underperformance. Central follow-up focuses more on support than on pressure. While there are no ways to reward or sanction municipalities, the central level will intervene if there is evidence that laws are not respected or that individual schools are consistently underperforming. In such cases, it is possible for the central level to recommend municipalities and schools to work with the central learning consultants to achieve improvement of processes and outcomes.

The central level plays a knowledge management function

The central level has also been taking on an increasing role in collecting and disseminating knowledge of good practice, for example through the creation of a specific division for knowledge mobilisation in the Ministry for Children, Education and Gender Equality. The ministry's "resource centre for the *Folkeskole*" plays a key role in overseeing the central learning consultants and bringing together both evidence from research and practical knowledge from the field. In the OECD review team's interviews it appeared that the central learning consultants had come to be well accepted within municipalities and schools. Central knowledge management based on research evidence was seen as complementary to local level expertise. This acceptance indicates good levels of trust and co-operation between the central and local level in the effort towards making educational practice more evidence-based.

Challenges

Challenges for maintaining a focus on broad learning goals

Danish education pursues a broad set of learning goals for all-rounded student development. As emphasised in the *Folkeskole* Act, Danish students are to acquire not only subject-specific knowledge but also cross-curricular learning goals such as imagination, confidence, collaboration and citizenship skills. The Common Objectives provide a fairly broad curricular frame and the 2014 *Folkeskole* reform again emphasises the importance of cross-curricular learning and the acquisition of competencies relying on a complex integration of knowledge, skills, attitudes and action. According to Houlberg et al. (2016), research in Denmark indicates that Danish teachers are motivated in their work primarily by the broader aims and purposes of the *Folkeskole*.

However, as in many other countries, there appears to be some lack of alignment in Denmark between these broad goals for student learning and relatively narrow measurements of learning. Although Danish teachers use a wide range of student assessment methods in the classroom (Shewbridge et al., 2011), there was a strong perception among teachers and school leaders interviewed by the OECD review team that schools were held accountable primarily based on the results of students on the national tests. This impression is reinforced by the fact that the main benchmarks for monitoring the

2014 Folkeskole reform are based primarily on the national test results. At the same time, official information on the national tests clearly repeats the message that the national tests only measure a discrete area of student knowledge and skills – providing a snapshot of student achievement in select learning targets – and that supplementary assessments are necessary to fully gauge student process.

If stated learning goals and measures of goal achievement are not well-aligned, there is a risk that the learning process itself will be impacted negatively. Research from different countries indicates that while assessment is primarily intended to measure the progress and outcomes of learning, it also has effects on the learning process itself (Somerset, 1996). Several authors have described this influence of assessment on teaching and learning as the “backwash effect” of student assessment (Alderson and Wall, 1993; Baartman et al., 2006; Somerset, 1996). This close interrelationship makes assessment an important tool to signal and clarify the key goals that students are expected to achieve. However, if assessment only covers a small fraction of the valued curriculum goals, then the impact of assessment on teaching and learning can be restrictive (Harlen, 2007).

There are some indications of this being the case in Denmark. Danish research indicates that the national goals seem to be implemented only to a limited degree at the school level (Normann Andersen and Strømbæk Pedersen, 2012; Skolens Rejsehold, 2010). Moos et al. (2013) observe a shift in focus within schools towards curriculum subject areas, resulting in less attention on cross-curricular activities. Research based on case studies published in 2008 found that a trend could be observed towards a more uniform, low-trust model between the school authorities (central and local) and schools, related to detailed standards for student achievement and a strict testing system. The studies also indicated that successful school leaders were able to challenge the narrow focus of assessment on basic academic skills and to point to the tension between such a focus and the general purpose of the Folkeskole regarding all-rounded student development and inclusiveness (Moos et al., 2008). Nevertheless, it also needs to be recognised that there are inevitable trade-offs between different goals in school systems, and that the focus on one goal may lead to a smaller focus on other goals.

There is limited attention to monitoring inputs and outcomes for different student groups

The OECD review team commends Denmark for its traditional focus on supporting equity and its ambition to offer needs-based and differentiated instruction to all student groups within a comprehensive compulsory school system (Chapter 2). The 2014 Folkeskole reform restates this focus on equity in education by placing among its three main goals that “the Folkeskole must lower the significance of social background on academic results”. Attention to equity is also reflected in municipal funding strategies. Available expenditure data clearly indicate that schools enrolling higher proportions of students from disadvantaged socio-economic backgrounds typically have considerably higher resource profiles than other schools (Houlberg et al., 2016).

Yet, although Denmark invests highly in schools enrolling students from socio-economically disadvantaged backgrounds, there is little evaluation of how this additional funding is used and in how far it contributes to improving learning opportunities for these student groups. Funding allocated for students from disadvantaged socio-economic backgrounds is not earmarked or tracked by municipalities. As a result, there is no empirical picture of expenditure outputs. In other words, we do not know what different student groups

get out of the use of school resource and how effectively such funding is used to address their learning needs. The review team also noted that the 2014 *Folkeskole* reform does not include an explicit vision or targeted measures to impact particularly on student groups at risk of underperformance. Hence, it is unclear how the goal of lowering the impact of student background variables on student learning is to be brought about. There is no public central pool or clearinghouse to bring together evaluations by schools or municipalities of the use of funding to support the learning of student groups at risk of underperformance.

In addition, the OECD review team formed the impression that only limited attention was paid in the evaluation and assessment framework to monitoring the equity outcomes of the system. The 2014 *Folkeskole* reform does not set specific targets or benchmarks for reducing educational disadvantage for particular groups, such as those students from lower income families, with a disability or with an immigrant background. In the monitoring of educational quality at the school, local and central level, student assessment results are not systematically disaggregated for student groups from different backgrounds, and there appeared to be little differential analysis on how the reform initiatives impact on different student groups. Except for the reference to socio-economic background in the reporting of final examination grades, information on student outcomes reported in the data warehouse is not systematically broken down for different student groups, such as by socio-economic background, gender, language spoken at home, place of birth, or special educational needs. As a result, system evaluation does not include measures to assess whether or not equity objectives are being achieved.

Similarly, at the level of municipalities and schools, while there is increasing focus on analysing student assessment results to formulate improvement strategies, it did not appear to be common practice to analyse results separately for different groups at risk of underperformance. Although for the national assessments teachers can specify particular groups of students and see an overview of their results, in the schools visited by the OECD review it was not common practice to analyse data separately for students from different backgrounds in order to develop targeted teaching and learning strategies. However, such differentiated analysis appears necessary in order to understand whether certain interventions may have differential effects on students from different groups and in order to design adequate strategies to meet specific learning needs (OECD, 2013b).

There is room to strengthen the focus of evaluation and assessment on the quality of learning for students with special educational needs

In the context of the current inclusion policy, stakeholder groups expressed concerns about the quality of learning for students with special educational needs (SEN). As part of the inclusion process, the government and LGDK had set themselves the target of achieving a 96% inclusion rate until 2015, but had paid less attention to measures to evaluate the quality of learning for SEN students.⁶ Stakeholders expressed such concerns both for students in inclusive settings and in separate special schools.

Denmark is aware of the importance of monitoring outcomes for SEN students and has taken some steps to adapt evaluation and assessment to their needs. There is a focus on the inclusion of SEN students in the national tests and these tests observe current international guidelines for accessibility (WCAG 2.0) for students with functional impairment at Level A. The Ministry for Children, Education and Gender Equality has prepared and continuously updated test performance instructions for teachers of students with functional impairment. The executive order on national tests establishes that if

students are exempted from tests, alternative forms of evaluation should replace national tests to ensure that all students are assessed.

Despite these national arrangements and guidelines, however, many schools appear to struggle with providing adequate learning and assessment opportunities for their students with SEN. Teachers working with SEN students interviewed by the OECD review team indicated that it was not clear to them how the national learning goals could be used and adapted for their students. Although teachers are required to draw up individual learning plans for each of their students, these plans were reported to be more content/activity-oriented than learning goal-oriented for students with SEN. While teachers and school leaders were keen to work with assessment and measurement to monitor the progress of their students towards learning goals, they felt that they had not been adequately prepared with knowledge and skills on how to do so.

This is in line with findings from international and national surveys. According to the OECD Teaching and Learning International Survey (TALIS) 2013, Danish lower secondary teachers expressed a high level of need for professional development in teaching students with SEN (more on this in Chapter 4). According to a survey from the Danish School of Education (DPU) and the Danish National Centre for Social Research (SFI) conducted in 2015, 40.9% of teachers taking part in the survey reported feeling professionally equipped to handle the challenges of inclusion they meet in their everyday life “to some degree” and 39% of teachers reported to feel professionally equipped “to a lesser degree”. Only 9.8% of teachers reported to feel professionally equipped to handle the challenges of inclusion “to a high degree”. According to another survey for 2016, 58% of participating teachers reported feeling competent to teach specific SEN students “to some degree”. 27% of teachers reported feeling competent “to a high degree”, while 14% of teachers reported not feeling competent to do so. Teachers interviewed in a Copenhagen special school further mentioned that there was no in-depth initial teacher education to prepare special educational needs teachers, and that schools typically needed to set up their own training to prepare new staff, although training offers did also exist at the level of some municipalities.

A stronger focus on excellence might be needed as well

With a view to achieving the goal of the 2014 *Folkeskole* reform to “challenge all students to reach their full potential”, the Danish school system would also benefit from a stronger focus on monitoring continuous improvement and excellence. By international comparison, Denmark has a relatively low proportion of top performing students and there is concern that highly talented students may not be receiving adequate levels of challenge and support to fully realise their academic potential in the *Folkeskole*. Evidence from the OECD PISA assessments has repeatedly shown a comparatively low proportion of Danish students able to perform the most demanding assessment tasks (Chapter 1).

In a study on the development of quality assurance and evaluation in Denmark, Normann Andersen et al. (2009) find that one of the most important functions of quality assurance and evaluation in Denmark has been to direct attention to what appears to be low performance. In line with this finding, Nielsen (2014) reports that school leaders give priority to educational goals on which their school is currently performing below expectations. In other words, low performance in particular areas is most likely to trigger school leaders’ analysis of performance data and increase their incentives to use such data for future planning and development. This is probably linked to the fact that current arrangements for central supervision focus mostly on detecting and addressing serious cases of

underperformance. The work of central learning consultants also has its main emphasis on helping struggling schools improve. While this attention to ensuring good education for all students is commendable, there is also room for the Danish school system to simultaneously pay attention to moving more schools “from good to great” by promoting excellence in school practices and outcomes.

There is a lack of transparency in the use of resources at the level of schools and municipalities

If the first step in evaluating resource use is to measure student outcomes in relation to national goals, the second is to measure expenditure outputs. The expenditure output is the real cost of educating a student. This is distinct from the spending priorities set at a national and even local level. The difference between inputs and expenditure outputs lies in the policies set at the municipal and school level.

Given Denmark’s decentralised approach to school funding, it is difficult to monitor how resources are being distributed and used at the local and school levels. As Hooge’s (2016) work on multiple school accountability in OECD countries highlights, when the national level is increasingly held accountable for the outcomes of the education system, while goals are set and decisions are made at the local level, making accountability work at lower levels of governance within the overall accountability framework becomes a critical topic. In Denmark, the Ministry of Social Affairs and the Interior manages a system for monitoring municipal performance that includes information on public spending by municipalities. But due to different accounting practices across the municipalities and different ways of organising the local school systems, it can be difficult to compare municipal spending data. Accounting data are available to the public, but the variation in the use of the account plan by different municipalities makes these data difficult to analyse in terms of monitoring the impact of funding. The municipal performance monitoring system does, furthermore, not include information on the outcomes of the education system, such as transition rates to youth education or results from national examinations. At the school level, too, there is a lack of fiscal transparency. Schools, as autonomous entities, receive a budget, but the real cost of running different programmes and services is not reported. Hence, there is little knowledge at the local and system level on how resources are used, whether resources are spent efficiently, and how inputs translate into outcomes. Municipalities often take little interest in monitoring the spending choices of their schools.

Although new laws are typically accompanied by central funding for the municipalities to achieve the law’s purpose, municipalities are autonomous in their spending decisions and the central level will only follow up if there is evidence that laws are not respected. In other words, there is no guarantee that funding allocated for specific purposes is in fact used for these purposes.

The development of the common business management system (FLIS) by the municipalities (see above) is commendable as it can support municipalities, and particularly those with weaker capacity, in their decision-making and analysis of resource use decisions. What is more, it has the potential to create greater transparency regarding school resources between municipalities and to allow municipalities to compare and benchmark themselves against other municipalities in selected key indicators. However, like the system run by the Ministry of Social Affairs and the Interior, FLIS does not yet include data on outcomes and it does not yet allow municipalities to analyse the effectiveness of their spending levels and priorities. The lack of availability of more disaggregate results of national assessments is, of

course, linked to the overall policy of confidentiality (see Box 3.1). Further, there does not yet seem to be much reflection how data systems developed at the central and local levels complement each other.

Available data could be used more effectively

As discussed in the previous sections, the availability of relevant data on both inputs and outcomes of schooling is a precondition for analysing the effectiveness of resource use and adapting strategies so as to work for further improvement. However, the availability of data alone will have little impact on the quality and equity of the school system – it is the use that is made of such data by professionals at all levels of the system that matters for the continuous improvement of teaching and learning.

Research published in 2008 noted that the publication of student outcome information was more in line with a broad concern for “openness and the right to know” rather than having a strict focus on accountability or measurement of effects. In addition, the key end users of the information (schools and parents) were not expressing any strong interest in the data (Normann Andersen et al., 2009). The groups of policy makers, stakeholders and researchers interviewed by the OECD review team reported that important progress had been made since 2008 both in the availability of relevant data and the focus of professionals on the assessment of outcomes. However, they were also consistent in reporting that further progress needed to be made in using this data effectively for accountability and improvement purposes.

As researchers from the Danish Evaluation Institute (EVA) reported to the OECD review team from their research on the use of data in Danish schools, data analysis for improvement planning is still not common practice in Denmark. Schools tend to focus more on practical aspects of school organisation and to analyse student behaviour more than student performance and progress. While some individual teachers seem to work effectively with the national tests, others seem to still be sceptical about the usefulness of these tests as a pedagogical tool and the extent to which the test results could help them inform future teaching and learning strategies. Shewbridge et al. (2011) noted that teachers still struggled with adapting their instructional strategies after diagnosis of student learning status and that school leaders had limited capacity to use data to best effect for whole-school evaluation and improvement. At the level of municipalities, while the awareness of information on student achievement is growing, different studies indicate that many municipalities still do not fully utilise the potential of evaluation and assessments and the data that these tools generate in order to follow up on the performance of individual schools (Houlberg et al., 2016; Shewbridge et al., 2011).

Policy recommendations

Ensure that all learning goals are given attention in the evaluation and assessment framework

A key challenge in monitoring the quality and progress of education systems is to develop indicators and measures of system performance that permit a good understanding of how well the education system is achieving its objectives. While national education goals are typically comprehensive and broad, monitoring systems may be rather limited in the information they can offer. This runs the risk of policy being driven primarily in areas where there are measures available (OECD, 2013b). For education monitoring to be meaningful, it must be well-aligned to the type of learning that is valued. In this context,

as recommended by Shewbridge et al. (2011), it would be beneficial for Denmark to consider introducing broader national measures of student learning to monitor the school system's progress in stimulating students to excellence in higher-order thinking and development of complex competencies.

A great deal of assessment research in recent years has focused on innovative and “authentic” forms of assessment that would be able to capture the type of learning that is valued in today's societies. These alternative forms of assessment are most commonly referred to as performance-based assessment. They may include open-ended tasks such as oral presentations, essays, experiments, projects, presentations, collaborative tasks, real-life cases, problem-solving assignments and portfolios. The main characteristic of performance assessments is that they assess a range of integrated knowledge and skills by asking students to perform a task rather than to provide a correct answer. As such, they are more effective at capturing more complex achievements than closed-ended formats (Looney, 2011). They are, however, more costly to implement on a large scale than closed-ended test formats.

One option for Denmark would be to consider introducing a light monitoring sample survey to supplement the current national monitoring system with information on broader competency goals. Such sample surveys can provide stable trend information and monitor a broader range of student knowledge and skills at a lower cost compared to a full cohort test. For an example from New Zealand, see Box 3.3.

Box 3.3. New Zealand's National Education Monitoring Project

In New Zealand, the National Education Monitoring Project (NEMP), conducted between 1995 and 2010, was designed to assess students in primary education in two different year groups (Years 4 and 8) and followed a set four-year survey cycle. In this way the NEMP was conducted each year, but assessed a different set of disciplines each time, with each discipline being tested only every four years. This allowed monitoring of a broad coverage of the national curriculum.

NEMP was designed to be as well aligned as possible with the curriculum by incorporating competency and value elements. The national curriculum encourages the development of values and key competencies, in addition to learning areas that students should master. Many of the NEMP assessment tasks were performance-based, requiring students to transfer learning to authentic close-to-real life situations. There were different assessment situations including one-to-one interviews, work stations and teamwork. As the assessment did not carry high stakes for students it was particularly important that tasks were meaningful and enjoyable to them. The assessment provided rich information on the processes used by students to solve problems or conduct experiments. Most assessment tasks were carried out orally so as to analyse what students can do without the interference of reading and writing skills. Some of the tasks were videotaped to allow for an in-depth analysis of student responses and interaction with teachers. NEMP also assessed students' cross-curricular skills, and attitudes towards the learning areas being assessed.

Another strength of NEMP was the high involvement of practicing teachers in all aspects of the assessment. Teachers participated in the development, trialling and implementation of NEMP. About 100 practicing teachers were freed from their teaching responsibilities each year to conduct the assessments. The teachers received one week of training and then administered the tasks over a period of five weeks. The intention was to ground the assessment

Box 3.3. New Zealand's National Education Monitoring Project (cont.)

practice in sound teaching practice and to build and strengthen teachers' assessment capacities. While NEMP was designed for system monitoring, examples of previous assessment tasks were available for teachers and could be used in the classroom. This could help teachers estimate how their own group of students compares to national assessment results. The project was replaced in 2010 by the National Monitoring Study of Student Achievement (for more information, see <http://nemp.otago.ac.nz>).

Source: Nusche, D. et al. (2012), *OECD Reviews of Evaluation and Assessment in Education: New Zealand*, <http://dx.doi.org/10.1787/9789264116917-en>.

System-level attention to broader learning goals can help communicate to municipalities and schools a shared focus on the broader aims of the *Folkeskole*. In addition, the central level should continue communicating to schools the importance of supplementing standardised national assessment tools with a range of other assessments to obtain relevant information on student learning across the curriculum and to use this information to design differentiated teaching strategies. As recommended by Shewbridge et al. (2011), it is important to continue to develop teachers' assessment capacities and to support data-driven professional learning communities that work with assessment data in non-threatening ways. To be able to assess students' progress in developing complex competencies, it is important that teachers learn to select and/or develop a variety of assessment approaches and understand different aspects of validity, including what different assessments can and cannot reveal about student learning (OECD, 2013b) (for more detail, see Chapter 4).

Pay special attention to monitoring the learning outcomes of students at risk of underperformance

While Denmark has comparatively fewer weak performers than other OECD countries international student assessments, there is evidence of significant performance disadvantage for some students. In particular, Denmark is well aware of the challenge of increasing the academic performance of bilingual students (Shewbridge et al., 2011). There is room to give more prominence to the monitoring of inequities in learning outcomes between specific student groups. For example, education system targets could pay attention to the achievement of different student groups to monitor the equity of outcomes of, for example, students not speaking Danish at home, students with a less advantaged socio-economic background, or students with a disability. It would be important to review how more targeted indicators for the achievement of equity goals could be included in the monitoring strategy for the 2014 *Folkeskole* reform.

The monitoring of results and goal achievement at the system level holds a strong potential to pay attention to equity issues and to inform policies on how to address these and to target support more effectively. Analyses from international and national research have proven the strong influence that socio-economic and other contextual factors have on student performance. Therefore, when comparing performance measures across municipalities and schools, it is imperative to make comparisons meaningful in light of different contexts. National research into how student background characteristics and school contextual characteristics are associated with student performance can identify the type of information that is most pertinent to collect systematically. Typically, information on the student socio-economic background may include a mix of the following factors:

immigrant/cultural/linguistic background, parental level of education, occupation and income level (OECD, 2013b).

Ensuring that key performance indicators in the data warehouse are systematically disaggregated for different groups at risk of underperformance would be helpful for monitoring the equity goals of the Danish school system at all levels of the system, including municipalities and schools. It would be of interest to provide national assessment data broken down by specific student groups at risk of underperformance in order to monitor trends and analyse whether certain groups face particular challenges with some tasks. Overall, the value of annual monitoring reports could be further enhanced by regularly reporting information on student learning outcomes for groups where there is evidence of systematic underperformance. This would allow tracking the education system's progress in responding to the needs of diverse groups. Feeding such disaggregated information back to municipalities and schools should also enhance their focus on equity outcomes and strategies in their own self-evaluations and development and improvement planning.

In addition, given the high investment of the Danish school system in schools enrolling students from socio-economically disadvantaged backgrounds and students with special educational needs, it would be important to monitor specifically how such funding is used at the school level and how resource use decisions in schools translate into performance for students at risk of underperformance (even if monitoring also requires regulations and implies costs). Analysing the relationship between investments in particular initiatives and student outcomes is a key step to understanding what works to improve equity in education and progressing towards the equity objective of the 2014 *Folkeskole* reform. To provide an example for the monitoring of resources at the school level, in England (United Kingdom), schools receive a per pupil premium for each deprived or otherwise disadvantaged student. Schools are free to spend this additional funding at their own discretion, but they are held accountable for how these additional funds translate into student achievement. External school evaluators (Office for Standards in Education Children's Services and Skills, Ofsted) identify schools in which disadvantaged students do very badly as requiring improvement and the spending of the pupil premium in these schools will be more closely monitored (Chowdry and Sibiet, 2011; Carpenter et al., 2013). In the case of Denmark, it would be the role of municipalities to collect data, track resources spent on different student groups and monitor how these resources support teaching and learning for students at risk of underperformance in schools. At the school level, it would be the role of school boards to discuss the use of resources and the achievement levels for different student groups with their school management.

Another option would be for the central level to commission thematic studies on the use of resources for equity and inclusion in Danish schools. In the Flemish Community of Belgium, for example, two in-depth studies on the use of schools' operational funding were published in 2015. The Belgian Court of Audit (2015) relied on a direct analysis of school accounts and addressed three main points: allocation mechanisms for school operating budgets, supervision of school budgeting and schools' use of budgets and objectives. A second study commissioned by the Flemish government to a group of researchers (Groenez et al., 2015) relied on a mix of qualitative interviews in 20 schools, a survey of school principals and a survey of municipalities to address the distribution of operating grants to schools and the use and management of operating grants by schools. The findings of these studies are directly useful for different levels of the education system in reviewing the efficiency of the funding model and making adjustments where necessary.

For example, the Court's audit of school operating budgets criticised that supervision of schools did not comprise a risk assessment procedure and that the Flemish authorities did not have the means to acquire a global view on the use of operating grants. It also found that there was little difference between the expenditure patterns of schools with high and low numbers of disadvantaged students, with the most disadvantaged schools having little resource margin to invest into specific pedagogical measures to enhance equal educational opportunities (for more information, see Nusche et al., 2015).

Further enhance goal orientation and quality assurance for students with special educational needs

As discussed above, there are concerns in Denmark – similar to other OECD countries – that the evaluation and assessment framework does not provide adequate mechanisms to monitor the quality of learning for SEN students. In the context of special education and inclusion, there is a risk that curricula and assessment frameworks may define achievement and progress too narrowly to capture many valuable areas of learning for SEN students. This makes it difficult to monitor quality for these students at a system level. At the school level, teachers may not always have the awareness and competencies to ensure adequate and innovative assessment of students with diverse needs and to report accordingly to parents. Research indicates that the quality of school leadership is fundamental to the quality of schools' inclusion (OECD, 2013b). This points to the need of providing focused professional learning opportunities in this area not only to teachers, but also to school leaders.

In Denmark, improving the quality of learning and the wellbeing of students with SEN is an important focus area for the central learning consultant corps. In addition to their work with municipalities and schools to plan and carry out improvements in the quality of inclusion, learning consultants also work with the quality of instruction in segregated SEN schools. This includes supporting the schools in improving the academic proficiency of students through working with goal-oriented teaching and the Common Objectives, for example through a series of professional development activities for teachers in SEN schools.

Going further, it would be important to synthesise the available evidence from both research and practice in Denmark regarding successful inclusive practices and goal-oriented teaching for students with SEN. A first step would be to conduct a thematic review or study of promising practices currently developed in Danish schools. Such a study could be commissioned by the Ministry for Children, Education and Gender Equality to the Danish Evaluation Institute (EVA) or other partners. Based on the findings of such a review, it is important that dimensions of inclusive assessment are further included and developed in both initial education and professional development for teachers.

In New Zealand, for example, a thematic review on Including Students with High Needs was conducted by the Education Review Office (ERO, 2010). The study found that of 229 reviewed schools, approximately 50% had mostly inclusive practices, while 30% had some inclusive practices and 20% had only few inclusive practices. Among the schools with few inclusive practices, weaknesses included poor assessment of student progress and insufficient monitoring of the teaching provided for students with high needs. The review identified a set of good practices related to the assessment of students with high needs which are likely to be relevant for Danish schools also (Nusche et al., 2012):

- Good reporting and communication with parents, which helps support students both at home and at school. In inclusive schools, parents were included in the development of

the Individual Education Programme (IEP) for their child and they also received less formal reports about their child's day to day progress.

- Good use of information on student achievement, interests, strengths, medical conditions, behaviour and parental expectations to inform the Individual Education Programme (IEP) given to individual students with high needs. The IEP is “a living document” that should guide the education programme for an individual student for a defined period and be reviewed at least twice a year. It should bring together the school, parents, student and possibly other agencies around the basic processes of assessing, objective setting, teaching, monitoring, evaluating, re-assessing and further planning to support the learning of the student. It should identify individual learning goals and define the time in which these goals should be achieved.
- SMART (specific, measurable, attributable, realistic and time-bound) objectives for the students' development, including academic, social and extracurricular development.
- Inclusion of the student's voice where possible and a focus on identified strengths and interests of the students rather than just on areas of difficulties.
- School-wide systems to monitor the effectiveness of initiatives for all students with special educational needs. This helped schools review and improve their performance in this area.

The New Zealand Ministry for Children, Education and Gender Equality is also supporting innovative approaches to assessment and reporting for diverse students and has launched a project on Assessment for Learners with Special Education Needs, which includes development of “narrative assessment” exemplars, guidance, and resources. Two key resource documents Narrative Assessment: A Guide for Teachers and The New Zealand Curriculum Exemplars for Learners with Special Education Needs are available to support teachers in maximising learning opportunities and pathways for children with special educational needs (Nusche et al., 2012). The development of such tools to support schools, teachers and school leaders to monitor the learning outcomes of students with special needs is also an option for Denmark.

Further support schools in striving towards excellence

As part of the 2014 Folkeskole reform, the Danish government aims to challenge all students to reach their full potential and to increase the number of high-performing students from year to year. A policy focused on increasing the number of high performers and supporting schools in achieving excellent results must set high standards for achievement, which not everyone can reach, or at least not at the same speed. In this context, using differentiated approaches to teaching, assessment and evaluation can help to take contextual differences into account and provide the right level of support and challenge to individual students, professionals and schools as organisations.

At the level of individual students, excellence could be supported through further attention to monitoring student progress and providing differentiated feedback for improvement. At the level of professionals and schools, Denmark could consider introducing differentiated supervision mechanisms. This would involve maintaining close attention to helping underperforming schools improve, but at the same time focussing also on schools that are already achieving average or good results so as to raise ambitions and move towards excellence. Box 3.4 provides examples of experiences in the Netherlands, where the government has made achieving excellence a key goal for the school system.

Box 3.4. The strive towards excellence in Dutch schools

There are a range of recent evaluation and assessment initiatives in the Netherlands that can be described as pursuing excellence through differentiation.

At the level of individual students, recent educational policy-making in the Netherlands has had a strong focus on stimulating differentiated instruction through “results-oriented work” at the school level. Results-oriented work involves helping schools to more fully exploit student monitoring assessments and, by analysing the information generated, to design appropriate teaching and learning strategies. Teachers are expected to explicitly define learning targets, regularly assess student performance, adapt teaching and learning to student needs, and intervene rapidly to help those who are falling behind in relation to set targets. Such approaches are to be stimulated and monitored by the Inspectorate. Recent laws require primary schools to use student monitoring systems for results-oriented work in schools, although schools retain the freedom to choose the provider and the frequency of test administration. There are three comprehensive student monitoring systems available to schools for this purpose, but virtually all primary schools participate in the Student Monitoring System (LVS) developed by the Central Institute for Test Development (Cito). The formative/diagnostic function of this assessment system is accomplished through provision of interpretive materials together with the results, as well as suggestions for relevant pedagogical strategies.

At the level of professionals in schools, the Dutch Ministry for Children, Education and Gender Equality, Culture and Science has implemented a prize for excellent school practices, as part of a system of national competition and quality awards. Such an award can become a powerful incentive for already “good” schools to make further efforts to improve their internal quality management practices. These practices can be significantly influenced by the selection criteria for the quality award.

At the level of schools as organisations, the Dutch Inspectorate is developing a differentiated inspection approach with the intention of helping schools that already provide basic quality education to further improve towards excellence. In the past few years, the Inspectorate had focused mainly on risk-based inspection where schools considered “at risk” have received a full quality inspection while “schools to be trusted” have been visited less frequently for a more basic inspection. While risk-based inspection remains an important aspect of school evaluation in the Netherlands, the Inspectorate is developing new forms of inspection which are extended to a wider group of schools with the aim of encouraging their excellence. Inspectors will, in the future, make a distinction not only between the categories of basic, weak or unsatisfactory schools, but additional categories of “moderate”, “average” and “good” are also to be used. This extension of attention from weak to good schools in order to help them move towards excellence is a key feature of the current government policy and fits with the government’s ambitions for achieving excellence both at the student and the school level.

Source: Nusche, D. et al. (2014), *OECD Reviews of Evaluation and Assessment in Education: Netherlands 2014*, <http://dx.doi.org/10.1787/9789264211940-en>.

Enhancing school evaluation practice would be key to continuously challenge all schools to improve. While Denmark does not have a system of regular national inspections of every school, the national level could play a stronger role in stimulating more effective self-evaluation at the school and local level. Mourshed et al. (2010) suggest that, whilst frequent high-stakes inspections of every individual school may be an appropriate strategy for systems seeking to raise themselves up from a relatively poor level of performance, systems that are

seeking to move from good levels of performance to achieve yet higher levels should focus their national support and external intervention on driving more effective self-evaluation.

The EC-funded Effective School Self-Evaluation project which analysed how 14 European countries or regions were promoting and supporting the development of self-evaluation in their schools concluded that self-evaluation will not develop effectively without some key elements of national infrastructure to support it, including an element of external review (SICI, 2003). The Danish Ministry for Children, Education and Gender Equality could take a stronger direct role in establishing and managing a national sample programme of external reviews of schools. This could be done working in partnership with LGDK and individual municipalities across Denmark, and involving the learning consultant corps. Cross-fertilisation through involving a wide range of school leaders in reviews of other schools in their local area would help maximise the positive impact of this programme as well as helping to ensure the validity and usefulness of its products. The focus of such a programme should be very strongly on capacity building and strengthening self-evaluation practice across the country.

In addition or alternatively to such a programme, it would be useful to centrally develop evaluation frameworks and criteria and to model good practice (Shewbridge et al., 2011). The central level (e.g. through the Agency for Education and Quality [Styrelsen for Undervisning og Kvalitet]) could consider creating a package of resources designed to support school leaders and municipal education offices with a practical toolkit for structuring any or all aspects of school evaluation. The development of a comprehensive national toolkit for school evaluation does not necessarily preclude the possibility that individual schools or whole municipalities might elect to use their own alternative approaches, or perhaps adapt and customise the national approach to suit their own circumstances. Experience from Scotland can provide some examples (Box 3.5).

Box 3.5. Scotland's "Journey to Excellence"

The Scottish education inspectorate (HM Inspectorate of Education) has developed a national web-based resource which provides schools and school managers with a comprehensive set of tools which they can use to structure effective school-level evaluation. This resource, known as Journey to Excellence has grown and developed over two decades and can be traced back to the publication of *How Good is our School?* in the late 1980s.

The complete Journey to Excellence package now includes the following parts:

- Part 1: *Aiming for Excellence*; explores the concept of excellence, what is meant by "learning" and "barriers to learning" and introduces ten dimensions of excellence.
- Part 2: *Exploring Excellence*; explores the ten dimensions in detail, giving practical examples from real schools which show the journey from "good" to "great".
- Part 3: *How Good is our School?* and *The Child at the Centre* present sets of quality indicators for use in the self-evaluation of schools and pre-school centres respectively, along with guidance on their use.
- Part 4: *Planning for Excellence* provides a guide for improvement planning in schools and pre-school centres.
- Part 5: *Exploring Excellence in Scottish Schools* consists of an online digital resource for professional development containing multimedia clips exemplifying aspects of excellence across a wide range of educational sectors and partner agencies. It also contains short videos from international education experts and researchers.

Box 3.5. Scotland’s “Journey to Excellence” (cont.)

Plans are underway to enhance the resource further with new resources to support schools in the process of developing long-term strategic thinking and managing major change in a school context.

The package is very widely used by schools across the country and by all Scotland’s 32 local authorities and most independent schools. The framework of quality indicators at the heart of the package are also used by inspectors for external review of schools. They were built on the criteria inspectors developed for their inspections and they are regularly refreshed and updated on the basis of developing understanding of the characteristics of effective practice.

Source: Education Scotland (2016), *The Journey to Excellence*, www.journeytoexcellence.org.uk (accessed 24 February 2016).

Strengthen public reporting about the performance of the system and analyse the effectiveness of resource use in municipalities and schools

To move the school system towards excellence while further narrowing equity gaps requires strong public consensus regarding fiscal effort and inclusiveness. The Ministry for Children, Education and Gender Equality has already undertaken considerable steps to make data from its monitoring system available for use by different stakeholders, and municipalities and schools in particular. The development of a data warehouse has been an important step in this regard. To build and sustain the overall consensus for investments in the *Folkeskole*, Denmark should consider strengthening its reporting about the performance of the school system also to the public at large at all levels of the system. Data on inputs and outcomes should be easily publicly available, e.g. through the data warehouse developed by the Ministry for Children, Education and Gender Equality and the system for monitoring municipal service performance of the Ministry of Social Affairs and the Interior. While it is difficult to evaluate the impact of indicator systems on changes to efficiency and effectiveness, well-designed indicator systems are information tools that can enhance the quality of decision making by reducing information asymmetries, and promote the accountability of public services to national, subnational, and citizens’ priorities (Mizell, 2008).

The system of the Ministry of Social Affairs and the Interior to monitor municipal service performance could be extended to include information on different outcomes of the school system. Systems in other countries that provide information for sub-national benchmarking and for evaluating the efficiency of sub-central spending could provide inspiration for doing so. Both, the Australian Review of Government Service Provision (www.pc.gov.au/research/ongoing/report-on-government-services) and Norway’s KOSTRA (Municipality-State-Reporting) system (www.ssb.no/en/offentlig-sektor/kostra), for example, monitor the extent to which services achieve equity, efficiency, and effectiveness goals. Both indicator and reporting systems include information on student learning outcomes (by state or territory in the case of Australia and by region in the case of Norway). The level of disaggregation of data on student assessments results in Denmark will depend on the overall policy of confidentiality.

Denmark could strengthen its reporting to the public further by developing a system-wide reporting framework that brings a broader range of financial indicators and outcome

indicators together. The central and local authorities could collaborate in the development of such a reporting framework and in reporting the respective data to increase the relevance and usefulness of the framework (Mizell, 2008). The reporting framework could form the basis for the periodic publication of key national analytical reports in addition to the digital publication of the data (e.g. in the ministry's data warehouse). While one needs to weigh the costs involved, the quality of the available budgeting and accounting information should be improved in the long run through the development of common reporting standards to ensure that data are comparable across municipalities. It could also be considered to extend the breadth of the available data on local inputs (e.g. by making available information on the teacher salary costs as a percentage of total expenditure, current expenditure on educational material per student, etc.).

New Zealand and Norway provide two examples for the development of a reporting framework to communicate information about the performance of the system, including on resources and outcomes. New Zealand has developed an Education Indicators Framework that helps decision makers analyse the state of the education system and monitor trends over time. The indicators described in this framework relate to six priority domains: education and learning outcomes; effective teaching; student engagement and participation; family and community engagement; quality education providers; and resources. For each of these six indicator domains, there are specific measures to determine the extent to which certain aspects of a result have been achieved. The Indicator Framework also includes contextual information to help the interpretation of results. The performance of the education system is assessed against these indicators and the data are available on line at the Education Counts website (www.educationcounts.govt.nz) (Nusche et al., 2012). In Norway, the Directorate for Education and Training reports its results from the national monitoring system through two major vehicles, the Education Mirror (*Utdanningsspeilet*), the Directorate's annual report on education in Norway (<http://utdanningsspeilet.udir.no>), and the web-based School Portal (*Skoleporten*) (<https://skoleporten.udir.no>). 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 presents 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 (Nusche et al., 2011).

Municipalities and schools should make efforts to bring together and analyse data on the use of resources and outcomes. LGDK should pursue its plans to develop the municipalities' common business management system (FLIS) into a data hub that brings together information on resources and outcomes. Individual municipalities should be encouraged to consider both financial and pedagogical dimensions in their biannual quality reports and to use data with a greater focus on the effective use of resources to meet the goals of the education system and the 2014 *Folkeskole* reform. At the school level, transparency could be enhanced by introducing a school-level reporting framework which enables schools to examine the fiscal impact of their resource and curriculum decisions. This is important as school professionals are key decision-makers on resource use in Denmark's decentralised school system. Such a reporting framework should be developed in consultation with schools, but the preparation of reports should be undertaken at a higher level of the administration, using existing budgeting and accounting data and not imposing

more paperwork on schools. This should help making more transparent the costs of delivery of school strategies and the budget impact of strategic decisions. Schools should also be encouraged by their municipalities to consider the impact of their resource use decisions as part of their self-evaluations.

Promote the better use of data at all levels

In many education systems, there is more data available from system-level indicators, evaluations and assessments than previously. Information, however, can only lead to school improvement if it is relevant, available in adequate quantity, and properly interpreted. These are all aspects to bear in mind when promoting the better use of data. At the same time, it is important for all actors of the system to be aware that the availability of large amounts of data must not be confounded with having a full understanding of any given situation. Current data collections omit important (and potentially explanatory) variables on issues as diverse as the role of non-cognitive skills in student achievement and motivation, teacher expectations, and a whole range of system-level variables. In complex environments these kinds of information can be as or more important in understanding interpersonal and institutional interactions than standard indicators on student achievement and teacher practice. Furthermore, even for standard measures, important information might be collected only partially or not systematically (for example, reasons underlying student dropout or issues with teacher retention (Blanchenay and Burns, 2016; Burns and Cerna, 2016)).

As the Danish school system is highly decentralised and relies on resource management and evaluation competencies of all its agents, it is of key importance to increase the capacity at all levels to ensure the effective use of available information in order to inform and improve future practices and resource decisions, and particularly at the level of schools and municipalities. Such capacity building must respond to the diverse needs of different stakeholders in the school system and consider equity issues inherent in the use of data and information. Some municipalities and schools may be more likely than others to fully use the available data – perhaps those that care more about education quality or those that have better capacity to analyse and interpret the available data.

For municipal staff, this means developing the capacity to understand, interpret and make decisions based on evaluation and assessment data collected from schools and drawn from the central data warehouse together with their own data on resource inputs, and to engage in meaningful discussions with their schools and school leaders on the basis of these data. This capacity needs to be sustained over time and ongoing resources should be set apart to make sure municipalities can play their supervision role to their full extent. Research on the use of education data at the local level from the United States provides some further insights into the challenges that local authorities can face and where they may need particular support. The major challenge that school districts reported for this report was to link the multiple data systems that had developed over time to better support decision making and in particular to better link student data to instructional practice. Less than half the school districts could link outcomes to processes in order to monitor and promote continuous improvement. For example, only 42% of school districts could link student performance to participation in particular programmes (U.S. Department of Education, 2010).

For school principals and teachers, it means developing the capacity to collect and report data on school budgets and student outcomes to students, parents, school boards and municipalities in effective ways without oversimplifying the complex issues involved in student learning. In other words, school leaders and educators need to be able to interpret

data and transform data into knowledge that meets their own needs and those of their different stakeholders. Earl and Katz (2002; 2006, cited in Hooge, 2016), point to three capacities that school leaders need to work in a data-rich world. First, school leaders need to develop an inquiry habit of mind. Leaders need to reserve judgment and have a tolerance for ambiguity, to value deep understanding, take a range of perspectives and systematically pose increasingly focused questions. Second, they need to become data literate. Leaders must be aware of how different data are needed for different purposes; they need to be able to evaluate data, recognising sound and unsound data, to be knowledgeable about statistical and measurement concepts, to recognise other kinds of data (not only numbers, but also opinions, anecdotes, observations), to make interpretation paramount (instead of using data for quick fixes), and to pay attention to reporting to different audiences. And third, school leaders need to be able to create a culture of inquiry. Leaders need to involve others in interpreting and engaging with the data, to stimulate an internal sense of urgency (refocusing the agenda), to make time for data interpretation and for coming to collective meaning and commitment, and to use critical friends. Exemplars of good practice in data interpretation, analysis, reporting and communication should be provided nationally to schools and municipalities to make sure some minimum requirements are met. Municipalities should, furthermore, support their schools to use the available data. Examples of support provided by school districts in the United States include: technical expertise to schools, “data coaches” available to schools, creating easy-to-read data “dashboards” to make information more accessible to teachers, and developing benchmark and formative assessments providing teachers with more timely data on student progress (U.S. Department of Education, 2010).

School professionals need to develop not only the capacity to use, interpret, follow up on, and communicate results obtained from nationally provided evaluation and assessment tools, but also to develop valid and reliable tools themselves which meet their own specific local needs. They need to be able to properly self-evaluate to obtain real insights into the quality and the processes of their school (Hooge, 2016). The ability to develop valid and reliable assessments is especially pertinent in curricular areas that are not covered in national assessments and in areas in which the school results are particularly problematic and where more information is needed on sub-groups of students. The central level (Ministry for Children, Education and Gender Equality, University Faculties of Education, the Danish Teachers’ Union) could consider developing a unique set of teachers’ competencies in assessment and evaluation, whether it has to do with assessment of student learning, teachers’ self-assessment of their professional development needs, the aggregation and interpretation of school results or the evaluation of the effectiveness of particular intervention strategies. Such a list of teachers’ competencies could be used to set clear targets for agreeing university programmes and country-wide graduating standards to be used by teacher educators. It could also be used to set priorities for mentoring beginning teachers and providing in-service teachers with continuous professional development (also see Chapter 4).

National expertise in this area could also be further developed. As Burns and Cerna (2016) noted, even though the focus is often placed on the local level in discussions of capacity, systemic weaknesses may be observed on every level of governance, especially in the ability to use data and research evidence for policy-making. In parallel to the spread of an emerging culture of assessment and evaluation among schools, it has, furthermore, become increasingly important to invest in higher education and research to increase the number of experts capable to anticipate and respond to future needs, offering the best advice available from scientific knowledge and scholarly work. For example, Danish researchers interviewed

by the OECD review team reported that relatively little research evidence was available in Denmark regarding the relationship between inputs and outputs, and the causal links between interventions and outcomes in the school system. Both the Ministry for Children, Education and Gender Equality and LGDK have an important role to play in the management and dissemination of such knowledge and the data required to undertake such analyses. They can facilitate interconnections within the system to increase the coherence of the evaluation and assessment framework and to properly align efforts and resources on priorities. Two types of connections are required:

- **Horizontal connections.** In a highly decentralised system, horizontal connections allow schools and municipalities to share expertise among them thus reducing duplications and helping the dissemination of transfers of good practice. Developing more deliberate improvement networks among practitioners can be a powerful organisational tool that embeds reform in interactions of different stakeholders, shares and disperses responsibility, and builds capacity through the production of new knowledge and mutual learning that can feed back into policy and practice (Katz et al., 2009; Chapman and Aspin, 2003). The central authorities and LGDK can contribute to creating an ambition-friendly and innovation-friendly environment by providing funding and support for schools and networks of schools to accelerate their work, and to provide regional and national forums where they can showcase their efforts to a broader audience (for an example from Norway, see Box 3.6). Municipalities also have an important role to play in facilitating learning and collaboration between their schools. They could use the available data on performance and context to link schools with similar profiles and challenges to share experiences and work together to improve the outcomes of all students (also see Chapter 4 and Box 4.3 on the London Challenge and City Challenge and the Ontario Focused Intervention Partnership).
- **Vertical connections.** Some local issues in students' achievement may be overwhelming for small schools and municipalities. Issues such as special needs education, second language literacy and impact assessment of resource strategies require levels of expertise and the mustering of resources that are beyond the scope of a local school or a small municipality. Here, the Ministry for Children, Education and Gender Equality can play a key role in connecting schools and municipalities to regional centres of expertise, universities, central learning consultants and other bodies offering support. Connecting schools, school leaders and teachers with researchers and engaging them in the use of research and knowledge through networks that are supported structurally (e.g. through universities) constitutes a promising avenue to build professionalism that is informed by evidence (Cordingley, 2016).

Box 3.6. Norway's local and regional networks for school efficiency and quality improvement

Policy making in Norway is characterised by a high level of respect for local ownership and school autonomy. In such a decentralised system, it is essential that different actors co-operate to share and spread good practice and thereby facilitate system learning and improvement. Networking is a common form of organisation among municipalities in Norway and there are a range of good examples where networks and partnerships have been established between different actors as a means to take collective responsibility for quality evaluation and improvement.

Box 3.6. Norway's local and regional networks for school efficiency and quality improvement (cont.)

Municipal networks for efficiency and improvement: In 2002, the Norwegian Association of Local and Regional Authorities (KS), the Ministry of Labour and Government Administration and the Ministry of Local Government and Regional Development set up “municipal networks for efficiency and improvement” that offer quality monitoring tools for local use and provide a platform for school owners to share experience, compare data and evaluate different ways of service delivery in different sectors. For the education sector, an agreement has been established between KS and the Directorate for Education and Training to allow the networks to use results from the national user surveys that are part of the national evaluation and assessment framework. The networks bring together municipal staff and school leaders to discuss school evaluation and assessment issues and engage in benchmarking exercises. Each network meets four or five times and then the opportunity is offered to another group of municipalities.

Regional groups working on external school evaluation: The Norwegian national school improvement project Knowledge Promotion – From Word to Deed (2006-10) was launched by the Directorate for Education and Training to strengthen the sector's ability to evaluate its own results and plan improvement in line with the objectives in the Knowledge Promotion reform. One of the outcomes of the project was the establishment of 11 regional groups to continue to work on school evaluation. These groups received training in the programme's methodology for external school evaluation and have begun to establish local systems for external evaluation of schools.

Guidance Corps for school improvement: The Norwegian Directorate for Education and Training has also established a “Guidance Corps” of exemplary school leaders who make themselves available to work together with school owners that have been targeted as needing help with capacity development.

Source: Nusche, D. et al. (2011), *OECD Reviews of Evaluation and Assessment in Education: Norway 2011*, <http://dx.doi.org/10.1787/9789264117006-en>.

The establishment of a central group of learning consultants that work with municipalities and schools is a promising initiative to develop local capacity and to promote the use of data in schools and municipalities (also see Chapter 4). This initiative should be sustained and further developed. Ontario, Canada, created a Literacy and Numeracy Secretariat (LNS) in 2004 as part of its Literacy and Numeracy Strategy. Through the LNS, highly skilled and experienced educators (known as student achievement officers) work directly with schools and school boards across the province to build capacity and implement strategies to improve students' skills in reading, writing and mathematics. An evaluation of the impact of initiatives introduced by the LNS concludes that they have had “a major, and primarily highly positive, impact on Ontario's education system” strengthening the use of evidence, research, evaluation and data throughout the system (Canadian Language and Literacy Research Network, 2009).

A further area in which efforts are needed is to ensure schools and local education authorities are provided with useful information for their own management. For example, it is important to enable schools to compare their own data with indicators aggregated to meaningful benchmark groupings (e.g. the similar pedagogical philosophy, etc.) (OECD, 2013b). The development of a data warehouse by the Ministry for Children, Education and Gender Equality that facilitates easy access to the data that are available, therefore,

constitutes an important tool to facilitate and encourage the use of data at a local level. As Blanchenay and Burns (2016) highlighted, too much information can obscure information pertinent to decision-making and/or render it unusable by its sheer magnitude. The abundance of information may even be counterproductive, as “teachers and schools may metaphorically and literally close the door on new information, shutting out the noise” (O’Day, 2002 cited in Blanchenay and Burns, 2016). There is, then, the question how all the information that is available can be gathered and maintained in a way that can be used by different parties. The data warehouse initiative should be developed further in collaboration with municipalities, schools and the broader public to ensure the system meets the needs of different stakeholders.

Notes

1. In 2013/14, 74% of students in Year 2, 71% of students in Year 4, 72% of students in Year 6 and 76% of students in Year 8 achieved good results in Danish; in mathematics 64% of students in Year 3 and 69% of students in Year 6 achieved good results. In 2011/12, 73% of students in Year 2, 66% of students in Year 4, 69% of students in Year 6 and 74% of students in Year 8 achieved good results in Danish; in mathematics, 63% of students in Year 3 and 66% of students in Year 6 achieved good results (Danish Ministry for Children, Education and Gender Equality, 2016a).
2. In Danish, the share of high-performing students in Year 2 increased from 7% in 2011/12 to 8% in 2012/13, but remained stable in 2013/14. In Year 4, the share of high-performing students increased from 6% in 2011/12 to 7% in 2012/13 and to 8% in 2013/14. In Year 6, the share of high-performing students increased from 6% in 2011/12 to 7% in 2012/13 and remained stable in 2013/14. In Year 8, the share of high-performing students increased from 8% in 2011/12 to 9% in 2012/13 and to 11% in 2013/14. In mathematics, the share of high-performing students in Year 3 remained stable at 4% between 2011/12 and 2012/13 and increased to 5% in 2013/14. In Year 6, the share of high-performing students increased from 4% in 2011/12 to 6% in 2012/13 and remained stable in 2013/14 (Danish Ministry for Children, Education and Gender Equality, 2016a).
3. In Danish, the share of poor-performing students in Year 2 decreased from 11% in 2011/12 to 10% in 2012/13 and remained stable in 2013/14. In Year 4, the share of poor-performing students decreased from 14% in 2011/12 to 12% in 2012/13 and remained stable in 2013/14. In Year 6, the share of poor-performing students decreased from 12% in 2011/12 to 11% in 2012/13 and remained stable in 2013/14. In Year 8, the share of low-performing students decreased from 10% in 2011/12 to 9% in 2012/13 and remained stable in 2013/14. In mathematics, the share of poor-performing students in Year 3 remained stable at 15% between 2011/12 and 2013/14. In Year 6, the share of poor-performing students decreased from 17% in 2011/12 to 16% in 2012/13 and remained stable in 2013/14 (Danish Ministry for Children, Education and Gender Equality, 2016a).
4. The first wellbeing survey was carried out in 2014/15. Results are available on the data warehouse of the Danish Ministry for Children, Education and Gender Equality (2016).
5. Students must participate in the following assessments:
 - Danish, with a focus on reading in Years 2, 4, 6 and 8
 - English in Year 7
 - mathematics in Years 3 and 6
 - geography, biology and physics or chemistry in Year 8.

Assessments are computer-based and adaptive, i.e. if a student answers a question incorrectly, students are given an easier question; if students answer correctly, they are given a more difficult question. Assessments are one pedagogical tool for teachers to evaluate, develop and plan their teaching and for schools to plan their programme of education. Assessment results can guide students and help strengthen collaboration with parents by providing information about students’ learning progress.

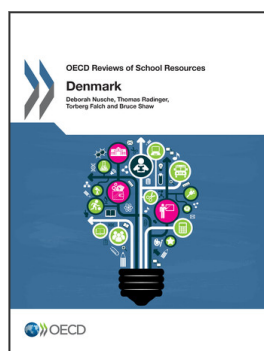
6. In June 2016, the Danish government and LGDK agreed to focus more on the individual child and that the creation of inclusive learning environments should be based on consideration of the individual child rather than an overall inclusion target of 96%.

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