OECD Reviews of Evaluation and Assessment in Education

DENMARK

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Executive Summary

The major responsibility for the quality of compulsory education in Denmark lies with the school providers – the 98 municipalities for the public schools (*Folkeskole*) and parent-elected boards for the private schools. An evaluation and assessment framework, therefore, plays a key role for central authorities to promote and monitor sufficient quality and focus on improvement. Denmark holds high ambitions to improve student outcomes and deserves credit for gaining broad agreement from all major stakeholders in efforts to stimulate an assessment and evaluation culture in compulsory education. Over a short period of time, Denmark has introduced new national bodies to monitor and evaluate quality in compulsory education, new national measures on student outcomes in compulsory education and requirements for municipalities to produce annual quality reports on their school systems. However, the suite of compulsory measures does not yet form a coherent framework for evaluation and assessment. In developing a strategic plan to complete the evaluation and assessment framework, the evaluation of teaching and learning quality should be at the core. Top priorities are to:

- **Integrate teacher and school principal appraisal in the framework.** Teachers are trusted professionals who increasingly work in teams and benefit from the support of special advisors. However, there is no shared understanding of what counts as accomplished teaching in Denmark and teacher appraisal is not systematic. A framework of teaching standards would provide a common basis for both teacher appraisal and a career structure for teachers. An external certification process would determine both teachers' career advancement and professional development plans. Danish teachers are generally keen to receive feedback for their professional development, but while some school principals hold a formal dialogue with teachers on an annual basis, it is not wide-spread practice for school principals to observe teaching. School principals should be held accountable for providing adequate developmental teacher appraisal and such appraisal should be linked with both teacher professional development and school improvement.

- **Refine key elements in the framework and clarify their purposes.** The Common Objectives that 'teaching should lead towards' in compulsory education provide a common basis for the evaluation and assessment of student learning progress in all schools. However, teachers and schools report difficulty in translating them into instructional and assessment plans. Refining these and developing performance standards against them would promote more consistent implementation and a more active engagement of students in their own assessment. At the same time, it would be important to review the purpose, procedures and content of the final examinations in Grade 9 to ensure they reflect both the breadth of outcomes and the type of skills desired at the end of compulsory education. The common set of indicators in the municipal quality reports does not sufficiently

address the quality of teaching and learning. Developing an agreed set of formal research-based criteria of school quality would make the internal and external evaluation of schools more coherent and relevant to school improvement. Further, at this pivotal stage it is critical to clarify the monitoring purpose of the national tests, further validate these and to develop a strategy to complement them with broader measures of outcomes, including stakeholder views on the quality of teaching and learning.

- **Invest in evaluation and assessment capacity development at all levels.** While there have been both central and municipal efforts to promote evaluation and assessment activities, implementation varies among schools and municipalities. Developing evaluation and assessment capacity throughout the compulsory education system includes further efforts to: build teacher assessment competencies, by ensuring adequate attention to this in initial teacher education, providing sufficient professional development and making more use of specialised evaluation advisors at schools; develop competency profiles for school principals and municipal education directors; engage schools in more systematic self-evaluation, by training school leaders to implement an authentic evaluation of teaching and learning, feedback and objective setting at their schools and preparing senior school staff for particular evaluation responsibilities; replenish central evaluation expertise to support capacity development at the municipal level; build on successful municipal partnerships to develop evaluation capacity; and strengthen the monitoring of municipal evaluation frameworks and ensure these include an evaluation of the quality of teaching and learning.

- **Promote and support the optimal use of evaluation and assessment results.** The new national tests offer a powerful pedagogical tool to teachers, and efforts should continue to promote the use of results by teachers to adjust teaching strategies and the possibility for teachers to re-administer the tests to follow up on student progress in the discrete areas tested. Similarly, national test results and the Individual Student Plans should be key elements in teachers' communication with students' parents. Outcome data and evaluation results should form a core part of the municipal monitoring system and discussion and follow-up with schools for improvement. Well led schools benefit from effective use of central or municipal self-evaluation guidelines, plus the rapid availability of results from the national tests. Devising an optimal system to feedback key results held at the national level to municipalities for their monitoring purposes will limit the repetition of basic statistical tasks at the municipal level. In general, the reporting and analysis of information from the national monitoring system could be further exploited to inform system improvement.

Assessment and Conclusions

Education system context

The vast majority of Danish students follow compulsory education in public schools and municipalities are responsible for their quality

While the Ministry of Education sets the legal framework for compulsory education providers and the overall objectives for compulsory education, the decentralised Danish system places the major responsibility for quality assurance with the providers. For public schools (the *Folkeskole*), the 98 municipalities are responsible for the overall quality of their schools and for setting local objectives and conditions, including the goals and scope for school activities, as well as the supervision of the *Folkeskole*. For private schools, parent-elected boards are responsible for school quality, in particular for ensuring that educational content matches academic standards in the *Folkeskole*, plus they are supervised by the Ministry of Education.

Political urgency to improve student learning outcomes in compulsory education and proposal for reform

The Danish Government's competitiveness strategy, in tandem with political and public debate on the 'mediocre' performance of Danish students on international assessments, has increased policy focus on improving student learning outcomes. While Denmark is proud of international evidence that its students are leaders in terms of civic knowledge, recent results from the OECD's Programme for International Student Assessment (PISA 2009) confirmed Denmark's average academic performance at the end of compulsory education and, importantly, a shortage of Danish students at the highest performance levels. Largely influenced by a review of the *Folkeskole* commissioned by the Prime Minister in early 2010, the government proposes a reform aiming to strengthen academic performance by giving more freedom to schools in return for an increased focus on results, in particular, the publication of national test results for schools.

An increased focus on evaluation, assessment and accountability since 2006, including new national bodies and quality assurance systems

The OECD in 2004 emphasised the importance of establishing an evaluation culture (following its review of the *Folkeskole*) and the revised 2006 *Folkeskole* Act aimed to stimulate this and to introduce an element of accountability to compulsory education providers. The raft of new national measures included the requirement for municipalities to draft and publish annual quality reports on the schools in their jurisdiction, the

introduction of national tests with a provision to publish a national performance profile on average performance in these tests, plus the introduction of mandatory Individual Student Plans to document student learning progress. The final examinations in Form 9 were made mandatory and the publication of these results by school and municipality was assured by the 2002 transparency law. Further, new national bodies were created to monitor and evaluate compulsory education. As of 1 March 2011, these comprise: the Quality and Supervision Agency (administering national and international assessments, producing quality support materials and supervising public and private providers); the School Council (an advisory body with authority to commission official evaluations); and the Danish Evaluation Institute (conducting both officially commissioned and independent evaluations).

Strengths and challenges

Political support and focus on outcomes has stimulated the development of an evaluation and assessment framework, but it is incomplete

Denmark holds high ambitions to improve student outcomes and deserves credit for gaining broad agreement from all major stakeholders and stimulating an assessment and evaluation culture in compulsory education. Over a short period of time, Denmark has introduced a suite of compulsory measures of student learning, a system of quality reporting involving municipalities and schools, and a national structure to monitor outcomes and evaluate priorities in compulsory education. Further, these measures for student assessment, school evaluation and system evaluation were largely designed as a coherent set and a process of ongoing dialogue and evaluation seeks to maximise their effectiveness and adjust them where necessary. However, they are not yet fully developed and do not yet form a coherent framework for evaluation and assessment. Importantly, the framework does not include the key components of teacher and school principal appraisal. Further, the private sector is not fully integrated.

There is a common basis for evaluation and assessment and capacity building efforts, but activities vary among schools and municipalities

Binding national Common Objectives specify the skills and knowledge that 'teaching should lead towards' by the end of compulsory education in a given subject (end objectives) as well as at different stages of compulsory education (form-level objectives) and must be used in all schools. These form a common basis for the evaluation and assessment of student learning progress. Further, central and municipal efforts to promote evaluation and assessment activities include centrally developed tools for teachers, schools and municipalities, training for municipalities on drafting quality reports, plus conferences and partnerships to share and build municipal efforts. However, the implementation of the Common Objectives varies due to limited detail in some subjects and a lack of assessment exemplars beyond those for the final examinations. Further, the level of municipal oversight and support to ensure that schools achieve these varies significantly and quality reports include no information on this apart from student results in the final examinations.

Students experience a wide range of assessment methods in their classrooms, but criticise the final examinations in Form 9

Teachers and students report using an admirable mix of different assessment methods. As such, there is very strong potential for effective formative assessment practice, *i.e.* the use of frequent assessments to identify learning needs and adapt teaching. However, the reported lack of clarity of the Common Objectives makes it difficult for teachers and schools to translate the content into instructional and assessment plans. Teachers carry the major responsibility for student summative assessment at the end of compulsory education allowing a broad overview of student achievement. In Form 9, all students must complete a mandatory project assignment in addition to written and oral standard examinations. Common marking guidelines and moderation procedures provide an equitable way to judge whether students have achieved the Common Objectives. However, the final examinations are criticised by students and others as being 'outdated' and students are not able to sit examinations in all subjects that they study.

National tests are powerful diagnostic tools for teachers, but not all teachers use these effectively

The rapid feedback (next day) of student results on the computer-based national tests fosters their use by teachers to adapt teaching and allows teachers to track performance of different student groups and classes. Teachers can even re-administer the test to monitor student progress. Further, results provide a very accurate diagnosis of student performance within discrete areas of the Common Objectives, as each student answers different questions adapted to his/her ability level. However, there is a need to engage some teachers in the effective use of national test results due to a lack of familiarity with the tests and analytical tools, the current debate on their potential use to hold schools accountable and the initial implementation issues in administering the computer-based tests.

Teachers are trusted professionals who draw on the expertise of advisors, but 'accomplished teaching' is not defined

Teachers are given considerable scope to exercise their professionalism and benefit from good levels of trust among students, parents, and the community. Schools increasingly structure their work around teaching teams sharing responsibility for organising and planning instruction and engage special support advisors, including, in a minority of schools, evaluation advisors. However, teacher appraisal is not systematic and depends on the ethos of the school or municipality. Further, there is no shared understanding of what counts as accomplished teaching in Denmark. Therefore, there is little opportunity for formal recognition and Danish teachers report that appraisal and feedback has little impact.

Teachers are keen to receive professional feedback, but there is no guarantee of pedagogical leadership

Danish teachers are generally keen to receive feedback for their professional development. Centrally developed tools for teacher appraisal are available and some feedback practices are starting to emerge, *e.g.* peers visiting classrooms or teachers seeking feedback from students via surveys. Although some school principals hold a

formal dialogue with teachers on an annual basis, there is no guarantee that teachers receive feedback for improvement. Crucially, it is not wide-spread practice for school principals to observe teaching and according to teacher reports this has much less importance in Danish teachers' appraisal than on average internationally. Where teacher appraisal happens, it does not appear to be adequately linked to professional development or school improvement in general.

National initiatives have helped to stimulate school evaluation, but there is no shared idea of what makes a good school

The national requirement for municipalities to produce annual quality reports and to publish these on their websites has been accompanied by central efforts to build municipal capacity by documenting and sharing municipal approaches and offering training to municipal officials. The School Council evaluates that such efforts have stimulated school evaluation in compulsory education. The quality reports include a common set of centrally specified indicators, as well as locally relevant indicators specified by municipalities. However, the common indicators do not sufficiently address the core processes of the quality of teaching and learning and leadership. At this stage, there is no common understanding among stakeholders in compulsory education as to what makes a good school.

Municipal quality reports should lead to positive action for school improvement, but there is a need to embed follow-up by municipalities

Municipal quality reports are intended to be the basis of further action in managing the system at the level of the municipality. First, they provide an agenda for dialogue between the municipality and the school principal and an opportunity to set aspirational targets which, replicated on a large scale, could contribute to the improvement of educational performance nationally. Second, municipalities are required to produce action plans for schools that are underachieving, which should be an important lever for school improvement provided the school has the capacity to take the necessary steps. However, the degree of follow-up by municipalities varies and is not always rigorous and objective. Without adequate follow-up of schools' subsequent action, the municipal quality reports can have little impact on school improvement.

Schools benefit from the availability of more information and tools for self-evaluation, but need to develop expertise to use these effectively

The self-evaluation guidelines and other tools offered by the Danish Evaluation Institute, Local Government Denmark and some municipalities are valued by some school principals who feel empowered to be more accountable for the effectiveness and performance of their schools. Similarly, the rapid availability of results from the national tests is welcomed by teachers in well-led schools as a way to reflect on teaching strategies. However, in general there is limited evidence of school self-evaluation or observation-based appraisal of teachers. The predominant culture lacks the discipline involved in arriving at an assessment of the quality or impact of practice through the

collection of relevant evidence and analysis against a framework of principles, criteria or benchmarks for school improvement.

Denmark has developed much-needed national measures on outcomes, but these need to be further developed and complemented

Since 2001, the publication of final examination results in Forms 9 and 10, alongside teacher-awarded final grades, serve as the major national indicators of overall quality in Danish compulsory education, as they cover the *Folkeskole* and the majority of private providers. These complement international measures (*e.g.* PISA), to inform debate on the overall productivity agenda. The introduction of the national tests also offers monitoring information on the *Folkeskole* at different stages in compulsory education and the first real opportunity to reliably monitor progress in educational outcomes over time against the national Common Objectives. However, the lack of inclusion of the private sector limits their national monitoring value. Plus a lack of clarification of how results will be used to hold schools accountable runs the risk that results will not reflect real progress in outcomes, but rather just increased focus in instruction on the discrete areas measured in the tests. Further, it is not clear to what extent current national measures are assessing higher-order thinking skills and cross-curricular competencies – a serious concern if they are to signal the expected outcomes of compulsory education. Also, there is a lack of information on the quality of the teaching and learning environment, *e.g.* views of students, teachers and parents.

There is a strengthened national structure to monitor compulsory education, but no overview of municipal quality assurance systems

The Quality and Supervision Agency has the mandate to monitor, evaluate and promote quality in the Danish school system, including monitoring school providers. In addition, the School Council has introduced a more systematic evaluation of the *Folkeskole* by commissioning high-quality evaluations on a large scale in different priority areas. However, there is no comprehensive overview of municipal quality assurance systems. Currently, the Quality and Supervision Agency limits monitoring to a compliancy check on the content of the municipal quality reports, plus a focus on sustained underperformance in particular schools (as evidenced by their Form 9 and 10 results).

Pointers for future policy development

Develop a strategic plan to complete the evaluation and assessment framework

Building on the national student assessment, school and system evaluation measures, there should be a strategic plan to complete the evaluation and assessment framework, including the evaluation of municipalities and school principal and teacher appraisal. A successful framework will allow proper articulation between the different evaluation components (*e.g.* between school evaluation and teacher appraisal) and include the evaluation of teaching and learning quality at the core. This indicates that school

evaluation should comprise the monitoring of the quality of teaching and learning, possibly include the external validation of school-based processes for teacher appraisal (holding the school principal accountable as necessary), and school development processes should explore links to the evaluation of teaching practice. In the context of school self-evaluation, it is also important to ensure the centrality of the evaluation of teaching quality and the feedback to individual teachers. Priority should be given to ensuring that there is heightened consistency among municipal quality assurance systems and that these focus adequately on the quality of teaching and learning.

Prioritise evaluation and assessment capacity development, clarify evaluation purposes and refine and update central measures

Now that the major centrally-designed evaluation tools have all been introduced to the *Folkeskole* (and mandatory examinations to private schools), there is considerable need to strengthen central support to ensure that these tools are linked to effective classroom practices. The top priority is to significantly invest in capacity development across the compulsory education system to ensure the effective use of these and other evaluation and assessment measures by stakeholders. The effectiveness of the overall evaluation and assessment framework depends to a large extent on whether those who evaluate and those who use evaluation results at the different levels of the system have the appropriate competencies. Further, it should be clearly communicated that the purpose of such evaluation tools is to improve educational outcomes and that stakeholders should actively use these to develop strategic improvement or action plans at all levels. In going forward there is a need to refine and expand the Common Objectives including a set of performance standards to make them a powerful basis for student assessment and school self-evaluation, to define evidence-based teaching standards, and to further develop central evaluation and assessment tools, *e.g.* making quality reports relevant to school self-evaluation and ensuring the final examinations reflect the knowledge and skills expected at the end of compulsory education. The *Evaluation portal* remains vital and should be expanded to offer more evaluation tools that are aligned with the Common Objectives.

Develop performance standards, engage students in assessment and review the final examinations

The Common Objectives articulate the knowledge and skills that 'teaching should lead towards', but not what students are expected to learn at key stages in each of the main subjects. Common Objectives with specific performance standards could guide instruction and assessment more effectively. As such, there is room to further refine and expand the Common Objectives, develop a set of specific performance standards against these and provide relevant support materials for teachers to mobilise the performance standards. It is important to build on democratic traditions and to ensure that students are actively involved in assessment. Specifying what will be assessed and how is the key to this and teachers can use performance standards to develop specific scoring rubrics with students and to stimulate student self- and peer-assessment processes. At the same time as clarifying the Common Objectives, there should be a review of the content of the final examinations to ensure they are adequately aligned with expected outcomes and performance standards set in the Common Objectives. Further, if the final examinations

are to carry higher stakes for students' entry into upper secondary education, then current procedures should be reviewed, including the moderation of oral examinations and the coverage of subjects offered in the final form levels of the *Folkeskole*.

Further develop national tests and develop teacher assessment competencies to maximise their pedagogical value

It is important to continue efforts to validate and further develop the national tests by ensuring that all Common Objectives and subject areas are given certain forms of attention and the tests are adequately aligned with the Common Objectives and include performance tasks. It is critically important to engage teachers in working effectively with the national test results as one means to diagnose student learning needs and to adjust their teaching strategies accordingly. In general, teachers need to be actively involved in developing data-driven professional learning communities where assessment data are used in non-threatening ways and teachers develop assessment competencies. This takes time and it is crucial that assessment literacy is adequately covered in initial teacher education. Further, professional development will play a pivotal role in realising a paradigm shift so that teachers view assessment as an integral part of their teaching and not as an additional burden on their teaching responsibilities.

Develop teaching standards as a basis for a career structure with progression determined by certification

Developing a framework of teaching standards as a reference for teacher appraisal is a top priority. A clear and concise profile needs to reflect the sophistication and complexity of what effective teachers are expected to know and be able to do and should be based on the objectives for student learning (the Common Objectives), be informed by research, and benefit from the ownership and responsibility of the teaching profession. Such standards should provide the common basis to organise a career structure for teachers, expressing different career stages, such as competent teacher, established teacher, and accomplished/expert teacher, with distinct roles and responsibilities in schools associated with given levels of teaching expertise. Access to each of the key stages could be associated with formal processes of appraisal through a system of teacher certification. New teachers should only access the first stage after successful completion of a mandatory probationary period. The absence of career opportunities for effective teachers undermines the role of teacher appraisal. Teacher appraisal for certification would aim to hold teachers accountable for their practice and determine both their career advancement and professional development plans.

Strengthen developmental teacher appraisal and link this with professional development and school improvement

There needs to be a stronger emphasis on teacher appraisal for the continuous improvement of teaching practices in the school (*i.e.* developmental appraisal). This would be an internal process carried out by line managers, senior peers, and the school principal (or members of the management group). The reference standards would be the teaching standards but with school-based indicators and criteria reflecting the school objectives and context. The process should be firmly linked with teachers' professional development and school improvement. The main outcome would be meaningful feedback

on teaching performance as well as on the overall contribution to the school which would lead to a plan for professional development. To be effective, appraisal for improvement requires a culture in which there is developmental classroom observation, professional feedback, peer discussion and coaching opportunities. Municipalities should ensure there are effective developmental appraisal procedures in place and hold school principals accountable for this. School principals could build capacity in appraisal methods at the school level by preparing members of the management group or accomplished/expert teachers to undertake specific evaluation functions within the school, including a stronger role for evaluation advisors.

Define formal criteria of school quality and make the quality reports more useful for school self-evaluation

The internal and external evaluation of schools, including the municipal quality reports, should be based on an agreed set of formal criteria of school quality, *e.g.* the quality of teaching and learning, teacher professional development, pedagogical leadership, school curriculum, vision and expectations, plus the assessment of student learning progress and outcomes. Without this, the school evaluation framework lacks coherence. The quality reports should be further developed in ways which encourage and take greater account of school self-evaluation and teacher appraisal, and that put the quality of teaching and learning at the heart of the process. A requirement for schools to produce an annual quality report would be a stimulus for many schools to further their self-evaluation practices and holds strong potential for school improvement, if the process adequately engages the school community and the report is based on sound school quality criteria. School principals are pivotal in developing a school self-evaluation culture. This argues for a shift in the role of school principal from one who administers and manages the school and organises its staffing, students and programmes, to one who is the pedagogical leader of the school.

Strengthen municipal and school follow-up on school evaluation results and support school evaluation capacity development

The school evaluation culture will not be endemic until evaluation is shared, followed up and reviewed to see what difference it has made both internally by schools and externally by municipalities. Outcome data and evaluation results should form a core part of the municipal monitoring system and discussion and follow-up with schools for improvement. In particular, nationally comparable information, including national test results, transition statistics and student final grades in Form 9, provide comparative information across schools that can be used by municipalities most constructively to identify improvement and share best practice among schools. Municipalities and schools need to go further to ensure constructive use of these outcome data and strive to complement them with other measures. To promote internal and external school evaluation capacity, it would be useful to establish an authoritative centre for school evaluation at arm's length from schools and municipalities to develop evaluation frameworks and criteria and model good practice. Given their key influence in furthering the effective internal and external evaluation of schools, there should be competency profiles for both municipal education directors and school principals.

Develop broader measures of outcomes at the system level and carefully review the monitoring role of national tests

It is important to develop a strategy to complement existing national monitoring information with broader measures of outcomes, including stakeholder views on the quality of teaching and learning. There is strong support among key stakeholders to develop broader measures of student learning, *e.g.* creativity and innovation, and it would be useful to take stock of current efforts to develop such measures at the municipal level and to evaluate to what extent these could be supported and extended throughout the system. The current national tests could be developed to measure the progression of a given cohort through compulsory education and to include open-ended questions. Longer-term efforts could include administering a light monitoring sample survey to provide stable trend information on a broader range of student knowledge and skills. Critically, there should be a careful review of strategies to maximise the monitoring potential of the national tests at the system level, in particular the proposal to publish national test results at the school level. The priorities would be to continue to validate the national tests and to go further in supporting and promoting capacity building to ensure the effective use of national test results by school principals and municipal directors as a core part of their quality monitoring systems.

Strengthen efforts to both monitor and promote municipal evaluation capacity

Clearly formulated objectives and performance management at the municipal level together with strong school leadership has proven to be an effective partnership for improvement in Denmark. Therefore, central monitoring of municipal evaluation capacity should be strengthened, as it is of key importance to identify municipalities where real progress is being made in student outcomes and to share this knowledge throughout the system. In subsequent years, one helpful indicator will be student progress as measured in the national tests and it will be important to invest in efficient systems to report and analyse this to feed results into the central monitoring of municipalities. It is of critical importance to devise an optimal feedback system of key results held at the national level to municipalities for their monitoring purposes, so as to minimise the repetition of basic statistical and reporting tasks at the municipal level. At the same time, there is room for further central and municipal collaboration to build municipal monitoring capacity, including the effective use of national test results and other performance indicators, and also to design ways to further stimulate horizontal collaborations among municipalities.

List of Acronyms and Abbreviated Terms

Acronym	Name
CBR	Country Background Report (the report prepared by Rambøll as a background document for this review)
EVA	Danish Evaluation Institute
IEA	International Association for the Evaluation of Educational Achievement
ISPs	Individual Student Plans
IT	Information Technology
KL	Local Government Denmark
OECD	Organisation for Economic Co-operation and Development
PISA	Programme for International Student Assessment
TALIS	Teaching and Learning International Survey
TIMSS	Trends in International Mathematics and Science Study
Abbreviated term	**Description**
Flying Squad	The review team that undertook the 360 degrees review of the *Folkeskole* in early 2010
School Council	The Council for Evaluation and Quality Development of Primary and Lower Secondary Education
School Agency	The Agency for the Evaluation and Quality of Primary and Lower Secondary Education (formed in 2006 and disbanded on 28 February 2011)

Chapter 1

Introduction

This Country Note for Denmark forms part of the OECD Review on Evaluation and Assessment Frameworks for Improving School Outcomes. The purpose of the Review is to explore how systems of evaluation and assessment can be used to improve the quality, equity and efficiency of school education. Denmark was one of the countries which opted to participate in the country review strand and host a visit by an external review team. This Country Note is the report from the review team. It provides, from an international perspective, an independent analysis of major issues facing the evaluation and assessment framework in Denmark, current policy initiatives, and possible future approaches. The Country Note serves three purposes: (1) Provide insights and advice to the Danish education authorities; (2) Help other OECD countries understand the Danish approach; and (3) Provide input for the final comparative report of the project.

1.1 Purpose of the OECD Review

This Country Note for Denmark forms part of the OECD *Review on Evaluation and Assessment Frameworks for Improving School Outcomes*. This Review is designed to respond to the strong interest in evaluation and assessment issues evident at national and international levels. It provides a description of design, implementation and use of assessment and evaluation procedures in countries; analyses strengths and weaknesses of different approaches; and provides recommendations for improvement. The OECD Review looks at the various components of assessment and evaluation frameworks that countries use with the objective of improving student outcomes. These include student assessment, teacher appraisal, school evaluation and system evaluation. The OECD Review focuses on primary and secondary education.[1]

The overall purpose is to explore how systems of evaluation and assessment can be used to improve the quality, equity and efficiency of school education.[2] The overarching policy question is "How can assessment and evaluation policies work together more effectively to improve student outcomes in primary and secondary schools?" The Review further concentrates on five key issues for analysis: *(i)* Designing a systemic framework for evaluation and assessment; *(ii)* Ensuring the effectiveness of evaluation and assessment procedures; *(iii)* Developing competencies for evaluation and for using feedback; *(iv)* Making the best use of evaluation results; and *(v)* Implementing evaluation and assessment policies.

Twenty-five education systems are actively engaged in the Review. These cover a wide range of economic and social contexts, and among them they illustrate quite different approaches to evaluation and assessment in school systems. This will allow a comparative perspective on key policy issues. These countries prepare a detailed background report, following a standard set of guidelines. Countries can also opt for a detailed review, undertaken by a team consisting of members of the OECD Secretariat and external experts. Ten OECD countries have opted for a country review. The final comparative report from the OECD Review, bringing together lessons from all countries, will be completed in 2012.

The project is overseen by the Group of National Experts on Evaluation and Assessment, which was established as a subsidiary body of the OECD Education Policy Committee in order to guide the methods, timing and principles of the Review. More details are available from the website dedicated to the Review: *www.oecd.org/edu/evaluationpolicy*.

1.2 The participation of Denmark

Denmark was one of the countries which opted to participate in the country review strand and host a visit by an external review team. Denmark's involvement in the OECD Review was co-ordinated by Ms. Charlotte Rotbøll, Special Consultant, Quality and Supervision Agency.

1. The scope of the OECD Review does not include early childhood education and care, apprenticeships within vocational education and training, and adult education. The Review in Denmark focuses on primary and lower secondary education.

2. The project's purposes, design and scope are detailed in OECD (2009a).

Denmark requested for the review to focus on compulsory education (primary and lower secondary education) and primarily on the public provision of compulsory education in the *Folkeskole*. Private compulsory education providers are also included in the review. The review does not pay attention to upper secondary education.

An important part of Denmark's involvement was the preparation of a comprehensive and informative Country Background Report (CBR) on evaluation and assessment policy.[3] The review team is very grateful to the authors of the CBR, and to all those who assisted them for providing an informative document. The CBR is an important output from the OECD activity in its own right as well as an important source for the review team. Unless indicated otherwise, the data for this report are taken from the Danish Country Background Report. The CBR follows guidelines prepared by the OECD Secretariat and provides extensive information, analysis and discussion in regard to the national context, the organisation of the education system, the main features of the evaluation and assessment framework and the views of key stakeholders. In this sense, the CBR and this Country Note complement each other and, for a more comprehensive view of evaluation and assessment in Denmark, should be read in conjunction.

The review visit to Denmark took place on 5-12 October 2010 and covered visits to Copenhagen, Odense, Hedensted and Glostrup. The itinerary is provided in Annex 1. The visit was designed by the OECD in collaboration with the Danish authorities. The reviewers comprised two OECD Secretariat members and two experts external to both the OECD and Denmark. The composition of the OECD review team is provided in Annex 2.

During the review visit, the OECD review team held discussions with a wide range of national, regional and local authorities; officials from the Ministry of Education; relevant agencies outside the Ministry which deal with evaluation and assessment issues; teacher unions; parents' organisations; representatives of schools; students' organisations; and researchers with an interest in evaluation and assessment issues. The OECD review team also visited a range of schools, interacting with school management, teachers and students. The intention was to provide a broad cross-section of information and opinions on evaluation and assessment policies and how their effectiveness can be improved.

This Country Note is the report from the OECD review team. The report provides, from an international perspective, an independent analysis of major issues facing the evaluation and assessment framework in Denmark, current policy initiatives, and possible future approaches. The Country Note serves three purposes:

- Provide insights and advice to the Danish education authorities,
- Help other OECD countries understand the Danish approach, and
- Provide input for the final comparative report of the project.

3. Rambøll (2011), *OECD Review on Evaluation and Assessment Frameworks for Improving School Outcomes: Country Background Report for Denmark*, available at: *www.oecd.org/edu/evaluationpolicy*.

1.3 Acknowledgements

The OECD review team wishes to record its grateful appreciation to the many people who gave time from their busy schedules to inform the OECD review team of their views, experiences and knowledge. The meetings were open and provided a wealth of insights. Special words of appreciation are due to the National Co-ordinator, Ms. Charlotte Rotbøll from the Danish Quality and Supervision Agency, for sharing her expertise and responding to the many questions of the review team. The courtesy and hospitality extended to us throughout our stay in Denmark made our task as a review team as pleasant and enjoyable as it was stimulating and challenging.

The OECD review team is also grateful to colleagues at the OECD, especially to Stefanie Dufaux for preparing the statistical annex to this Country Note (Annex 3) and to Heike-Daniela Herzog for editorial support.

While this report benefitted from the Danish CBR and other documents as well as the many discussions in Denmark, any errors or misinterpretations in this Country Note are our responsibility.

1.4 Structure of the Country Note

The remainder of this report is organised in six chapters. Chapter 2 provides the national context, with information on the Danish compulsory education system and recent developments. Chapter 3 looks at the overall evaluation and assessment framework and analyses how the different components of the framework play together and can be made more coherent to effectively improve student learning. Then Chapters 4 to 7 present each of the components of the evaluation and assessment framework – student assessment, teacher appraisal, school evaluation and system evaluation – in more depth, presenting strengths, challenges and policy suggestions.

The policy suggestions intend to build on reforms that are already underway in Denmark. The suggestions should take into account the difficulties that face any visiting group, no matter how well briefed, in grasping the complexity of the Danish compulsory education system and fully understanding all the issues.

Chapter 2

The Context of Evaluation and Assessment in Denmark

The decentralised Danish system places the major responsibility for quality assurance in compulsory education with the education providers, that is, the 98 municipalities for the public schools (Folkeskole) and parent-elected boards for private schools. Municipalities supervise the Folkeskole and the Ministry of Education supervises private schools. The Danish Government's competitiveness strategy plus the 'mediocre' performance of Danish students on international assessments, have increased policy focus on improving student learning outcomes. To this end, there have been sustained central efforts since 2006 to stimulate evaluation and assessment activities in compulsory education, including new national bodies to monitor and evaluate quality in compulsory education, new national measures on student outcomes in compulsory education and requirements for municipalities to produce annual quality reports on their school systems. A current proposal for reform aims to strengthen academic performance by giving more freedom to schools in return for an increased focus on results.

This chapter provides background information that will help readers not familiar with the Danish compulsory education system understand the context in which evaluation and assessment takes place. The chapter provides a brief overview of the current national demographic, political and economic context as well as a description of the key features of compulsory education in Denmark.

2.1 National context

Demographic context

Denmark has a population of 5.5 million people, with over one million living in Copenhagen and just over half a million living in the three other major cities Aarhus, Odense and Aalborg. The public sector was significantly reorganised in 2007 into five regions with 98 municipalities. This has seen administrative mergers of many of the former, smaller municipalities (prior to 2007, there were 274 in total) and in turn the creation of many larger schools. Ten per cent of all students in compulsory education have a migrant background, with over 60% of these students coming from Turkey, Iraq, the Lebanon, Somalia, Pakistan, Afghanistan, Bosnia-Herzegovina, Yugoslavia, Vietnam or Sri Lanka (The Danish Ministry of Education, 2010). The school population has grown in diversity also in terms of students' socio-economic background. Such administrative and demographic changes pose new opportunities and challenges to the delivery of high-quality compulsory education in Denmark.

Political context

Danish politics are very much about consensus. No single party has enjoyed a majority in the Danish parliament since 1909. Danish governments, therefore, are multiparty with a minority administration being supported by other parties. The current government consists of the Liberal and Conservative parties, with support from the Danish People's Party. This coalition has been in power since 2001. There are seventeen ministries, including the Ministry for Education. A new Minister for Education was appointed in March 2011. National elections are expected towards the end of 2011.

Economic context

The global crisis has not left Denmark untouched and there is still considerable slack in the economy, but recovery is expected to gain strength gradually (OECD, 2011). Denmark has achieved high levels of income and low inequality. However, over recent years the national income per capita has weakened relative to the leading OECD economies (OECD, 2009b). With labour use already high, the key to going forward is to boost productivity. As such, the Danish government has a strategy for Denmark in the global economy to achieve "Progress, Innovation and Cohesion" and has devised a framework to monitor progress in key areas. Improving educational outcomes is a core part of this strategy as human capital is essential to productivity growth and, of equal importance, can ensure continued high levels of equity in Danish society.

2.2 Main features of compulsory education in Denmark

Structure of compulsory education in Denmark

There are ten years of compulsory education in Denmark. Children usually begin their compulsory schooling in August of the year they turn 6 years of age. This reflects a recent change (August 2009) to make the 'pre-school class' year part of the compulsory education, *i.e.* compulsory education starts a year earlier. The ten years of compulsory education, therefore, run from the typical ages of 6 to 15 years and comprise one year of early childhood education in Form 0 (ISCED 0), Forms 1 to 6 of primary education (ISCED 1) and Forms 7 to 9 of lower secondary education (ISCED 2). There is also a voluntary Form 10 year offered as part of lower secondary education. In 2008-09, 49% of students attending Form 9 also attended Form 10.

Compulsory education is offered by both public and private schools, plus children can be taught at home. The vast majority of children follow their primary education in the public school (*Folkeskole*) – in 2008, 88% of children in Form 1 was in the *Folkeskole*. However, the proportion of children attending private lower secondary schools is higher, notably due to attendance at independent boarding schools. Overall, therefore, approximately 80% of all children enrolled in compulsory education are in the *Folkeskole*.

There are compulsory school-leaving examinations at the end of Form 9. Student success on such examinations does not determine their access to upper secondary education. In the *Folkeskole*, students will also sit national tests at different stages of their compulsory education (see Chapter 4).

Distribution of responsibilities

The *Folkeskole* are governed by the 98 municipalities in Denmark. Municipal responsibility for the *Folkeskole* was made more explicit in the 2006 revision of the *Folkeskole* Act. As such, municipalities are responsible for the overall quality of their schools and for setting local objectives and conditions, including the goals and scope for school activities, as well as the supervision of the *Folkeskole*. Municipalities need to draft and publish on their websites annual mandatory quality reports. They are the employers of all school staff and should be responsible for the appraisal of school principals.

Private independent schools are governed by a parent-elected board which is responsible for school quality, in particular for ensuring that educational content matches academic standards in the *Folkeskole* and that students are prepared for life in the Danish free and democratic society. There is external supervision of the quality of education in private schools. Traditionally, the Ministry of Education, by means of the Quality and Supervision Agency (see below), supervises the private school sector and can advise to stop public funding in cases of significant quality concerns. While the Ministry of Education has primary responsibility for supervising the quality of compulsory education offered at private schools, a new supervision possibility was introduced in August 2010, whereby parents in a given private school can elect a supervisor to conduct school self-evaluation. Such a supervisor must follow and successfully complete Ministry-approved training.

Financing

Education is prioritised and generously funded in Denmark in comparison to in other OECD countries. Denmark allocates a slightly higher proportion of public spending to general social protection and education, and a lower proportion to general public services (OECD, 2009c). Denmark's spending on primary and lower secondary education per student is high compared to other OECD countries (OECD, 2010a). Further, Denmark prioritises local funding to more flexibly meet local needs. A much larger share of spending is at the local government level in Denmark compared to in other OECD countries (OECD, 2009c). The Danish government provides block grants to the municipalities, but it is up to each municipality to determine the funding and level of service provided to the *Folkeskole* (Rambøll, 2011). Private schools also receive significant levels of government funding – this is equivalent to 75% of the average expenditure in the *Folkeskole*. This supports the tradition of offering private alternatives to the *Folkeskole*.

2.3 Main trends and concerns

Political urgency to improve student learning outcomes

Increased policy focus has been given to the performance of Danish students in international assessments of reading, mathematics and science skills. At the top political levels, this is judged to be 'mediocre' and the political discourse aspires for Danish students to be among the best in the world. The OECD's PISA 2009 results released in December 2010 confirmed Denmark's average position internationally in terms of student mean performance in reading at the end of compulsory education (OECD, 2010b).[4] International evidence on student performance in primary education (Form 4) is slightly more encouraging: mathematics and science results from the TIMSS 2007 assessment were above the international average (IEA, 2008a and b). At the same time, Denmark is justifiably proud that its students lead the international pack in terms of civic knowledge (IEA, 2010).

International evidence indicates that the key challenge is to stimulate average performing students to excellence. While in primary education, a higher proportion of Danish students achieved the advanced benchmark in mathematics than the international median, in science the proportion was the same as the international median (IEA, 2008a and b). At the end of compulsory education, there is a comparatively small proportion of Danish students demonstrating excellence as measured by the PISA tests: 4.7% of Danish students performed in the top two performance levels in the PISA reading tests, compared to 7.6% on average in the OECD countries (OECD, 2010b). Further, Denmark has lost ground here: while internationally there was a small decline in the proportion of students performing in the top two reading levels between 2000 and 2009, this decline was more pronounced in Denmark (OECD, 2010c)[5]. Similarly, there was a decline in the proportion of Danish students performing at the top level in the mathematics test between 2003 and

4. An assessment of 15-year-olds, PISA sheds light on what students demonstrate they know and can do at the end of compulsory education.

5. On average across the 26 OECD countries with comparable results for both the PISA 2000 and 2009 assessments, the combined percentage of students performing at Level 5 or 6 in reading was 9.0% in 2000 and decreased to 8.2% in 2009 (OECD, 2010c).

2009, but the proportion of Danish top performers in science remained stable between 2006 and 2009. In fact, put simply, there are too few Danish students demonstrating competence on the more challenging tasks and problems in the international tests (25.6% of Danish students perform in the top three reading levels, compared to 28.3% of students on average in the OECD). This fact has already been flagged in the Competitiveness Report based on PISA 2006 data and stating that 'the Government's objective is for the best students to be in line with the best-performing students in other countries' (Danish Ministry of Economic and Business Affairs, 2009).

Demands to effectively integrate all students into the Folkeskole

The *Folkeskole* offers integrated, comprehensive education and aims to differentiate teaching to individual student needs. Denmark enjoys comparative success internationally in limiting the proportion of low performing students at the end of compulsory education. PISA 2009 confirmed that compared to other countries, there are fewer students in Denmark who are unable to perform the most basic reading tasks and the proportion of low performing students has decreased since 2000 (OECD, 2010b; OECD, 2010c). This is a strong success factor for Danish compulsory education and it is commendable that the government wants to go even further in efforts to ensure all students have basic skills. International and national evidence reveal that there is a wide range of student ability within each school (*e.g.* OECD, 2010d; Wandall, 2010). Evidence from PISA 2009 shows a decrease in the variation in reading performance among students within schools in Denmark since 2000. However, there are stronger calls to go further in integrating all students successfully in the *Folkeskole*, in particular by reducing the proportion of students receiving special educational provision by integrating them in the *Folkeskole*. Further, international evidence and national research has shown a strong and persistent average performance disadvantage for students with a migrant background (*e.g.* OECD, 2010e; OECD, 2006; Egelund and Tranæs, 2008).

The between-school variation of performance in Denmark remains lower than the OECD average (OECD, 2010d), which indicates that the specific school a student attends has less of an impact on how the student performs in Denmark than is the case internationally.

New management structures for many Folkeskole following public sector reform

2007 saw the restructuring of the public sector in Denmark, merging several of the former 274 municipalities to create 98 municipalities. This has led to significant changes in the management of many *Folkeskole*. Such changes bring both challenges and opportunities to refocus on evaluation efforts and to build capacity in this area. There have been central efforts to bring municipalities together to exchange their experiences in establishing quality assurance systems by the former School Agency. A major effort to aid municipalities in organising their new school management structures (by focusing on the evaluation culture among other issues) was the Local Government Denmark (KL) partnership with 34 municipalities from 2007-2009.

2.4 Main developments

An increased focus on evaluation, assessment and accountability

The OECD (2004a) review of the *Folkeskole* emphasised the importance and difficulty of establishing an evaluation culture in Danish compulsory education: "… the establishment of a new culture of evaluation is bound to be difficult. Yet this is probably the most important single change that needs to be achieved if other measures are to be effectively implemented and standards are to rise." Following the review, a revision of the *Folkeskole* Act in 2006 saw the introduction of a raft of national measures aiming to stimulate an evaluation culture in the *Folkeskole* and to introduce an element of accountability to compulsory education providers. These included the requirement for municipalities to draft and publish annual quality reports on the schools in their jurisdiction, the introduction of national tests (with a provision to publish a national performance profile on average performance in these tests), plus the introduction of mandatory Individual Student Plans (ISPs) to document student learning progress. Further, the final examinations in Form 9 were made mandatory and the publication of these results by school and municipality was assured by the 2002 transparency law. As such, the revision of the *Folkeskole* Act in 2006 is described as 'a shift towards a more centralised approach to evaluation and assessment' in response to concerns of Danish students' performance in international assessments (Rambøll, 2011).

New national structure to promote evaluation and assessment in compulsory education

Since 2006, the creation of a new national structure has aimed to signal and establish the importance of evaluation and assessment in compulsory education, including: an advisory body with representatives from all the major stakeholder groups to inform the Minister of Education on the quality of the *Folkeskole* (the Council for Evaluation and Quality Development of Primary and Lower Secondary Education or 'the School Council') and an agency to monitor and develop quality in compulsory education (the former School Agency)[6]. As of 1 March 2011, in addition to the Ministry of Education and the School Council, there are three national bodies with a role in the evaluation and assessment of compulsory education: the Education Agency; the Quality and Supervision Agency; and the Danish Evaluation Institute (EVA).

- The Education Agency has responsibility for drawing up legislation for, as well as the management and operation of compulsory education and upper secondary education. The secretariat of the Chairmanship of the School Council now sits in the new Education Agency.

6. The School Agency was disbanded on 28 February 2011 and many of its responsibilities are taken up by the new Quality and Supervision Agency. This report refers to the School Agency when citing work conducted and completed on national monitoring and/or quality development efforts in compulsory education prior to 1 March 2011. When referring to any ongoing work or future policy options, the report cites the Quality and Supervision Agency.

- The Quality and Supervision Agency will be responsible for the financial, institutional and pedagogical supervision of both compulsory and upper secondary education, plus quality development in these sectors. As such, the Agency assumes responsibility for many key tasks performed by the former School Agency (see above). Major tasks include developing and running the national tests and final examinations in compulsory education, managing the implementation of international assessments, plus the development of evaluation support materials for schools in the *Evaluation portal*.
- The Danish Evaluation Institute (EVA) was established in 1999 to help bring about a shift from a focus on inputs to outputs (OECD, 2004a). EVA conducts evaluations in all levels of education in Denmark. Since 2006, its evaluations in compulsory education are commissioned by the School Council.

Proposal for reform in compulsory education (December 2010)

Since the OECD review visit was conducted in October 2010, the government has published a proposal for reform entitled 'Professionalism and Freedom' (Regeringen, 2010). The proposal makes clear the increased academic expectations of students in compulsory education, including that all children are able to read at the end of Form 2 and that there are significant improvements in Danish, mathematics, English and science. Accordingly, the proposal includes more instructional hours in these core subjects, plus the ability for schools to create talented and elite classes. The government also proposes more training for teachers and more money for research, plus 'character requirements' for teacher education to increase the prestige of the teaching profession. Importantly, the proposal argues that 'to match the greater freedom to schools' the results of the national tests in compulsory education should be published for each school.

The proposal draws on the findings of a 360 degrees review of the *Folkeskole* that was commissioned by the Prime Minister in early 2010 (see Box 2.1).

Box 2.1 A 360 degrees review of the *Folkeskole* (2010)

The Prime Minister commissioned the 360 degrees review in early 2010. The review team (the 'Flying Squad') comprised six members with different competencies, including experience with reviews of the *Folkeskole* (a member of the OECD 2003 review team and members of the School Council) and educators (two teachers and two school principals). The research base was strengthened by support from School Council staff and ready access to work already conducted by the School Council. Plus, the review team had funds to commission research reports on specific areas, *e.g.* a review of teacher education in internationally high performing countries. The review team produced a report with recommendations in seven thematic areas of equal importance, although representatives informed the OECD review team that teacher quality is at the core of the recommendations.

1. **Lift teacher, school leader and municipal education director competency**: Increase admission requirements to teacher training and make this research-based, schools to strategically use teacher training and competence development; offer school leaders and municipal education directors special management training to increase targets and results focus, identify and train up prospective leaders.
2. **Increase school development research**: Establish a research institute for school development and fund research on learning and teaching.
3. **Clarify student learning goals**: Modernise and prioritise the *Folkeskole* objectives to strengthen reading throughout schooling and to ensure broad student development.
4. **Focus on results**: Schools to produce annual school results reports; government to ensure easy access to results data and create fora for schools to share knowledge; municipal education directors to increase focus on results and school development; school results considered in school leader and municipal education director pay/progression.
5. **Ensure schools cater to all students:** Change legislation to reduce to a minimum number of students in special education provision; ensure teacher access to educational psychologists; prioritise parent-teacher co-operation; further integrate school and leisure time in schools with socially deprived children.
6. **Increase local freedom:** Scrap barriers to making up classes or groups; ease current requirements regarding minimum numbers of lessons; allow schools to employ people with different professional qualifications and to extend opening hours; give students more choice during the final years of compulsory schooling; use IT consistently; modernise the *Folkeskole* leaving examinations and make them count for students' access to upper secondary education.
7. **Improve school structure:** Ensure in future school size optimises teaching and management competences and effective utilisation of resources.

The review heavily influenced the government's new seven objectives for the *Folkeskole*, which include: reducing the number of students in special education; recruiting teachers from the best graduates; ensuring teaching is knowledge-based; clarifying objectives and making results transparent to lessen monitoring needs.

Source: Danish School Agency (2010).

Chapter 3

The Evaluation and Assessment Framework

Denmark deserves credit for stimulating an assessment and evaluation culture in compulsory education. However, the suite of compulsory measures for student assessment, school evaluation and system evaluation does not yet form a coherent framework for evaluation and assessment. Importantly, the framework does not include teacher and school principal appraisal. In developing a strategic plan to complete the evaluation and assessment framework, the evaluation of teaching and learning quality should be at the core. There is a common basis for the evaluation and assessment of student learning progress (the Common Objectives in compulsory education), plus there have been considerable central and municipal efforts to promote evaluation and assessment activities. However, implementation and activities vary among schools and municipalities. A priority now is to develop evaluation and assessment capacity throughout the compulsory education system. There is also room to clarify evaluation purposes and to refine and update the Common Objectives and other central measures.

This chapter looks at the overall framework for evaluation and assessment in Denmark, *i.e.* its various components such as student assessment, teacher appraisal, school evaluation and system evaluation, the coherence of the whole as well as the articulation between the different components. Following this overview, the succeeding chapters (4-7) will analyse the issues relevant to each individual component in more depth.

This report differentiates between the terms "assessment", "appraisal" and "evaluation". The term "assessment" is used to refer to judgements on individual student performance and achievement of learning goals. It covers classroom-based assessments as well as large-scale, external tests and examinations. The term "appraisal" is used to refer to judgements on the performance of school-level professionals, *i.e.* teachers and school leaders. Finally, the term "evaluation" is used to refer to judgements on the effectiveness of schools, school systems and policies. This includes school inspections, school self-evaluations, evaluation of municipalities, system evaluation and targeted programme evaluations.

3.1 Context and features

As a result of the OECD's recommendation in 2004 to create an evaluation culture in compulsory education, Denmark introduced several measures in 2006 to strengthen student assessment, school evaluation and system evaluation. These were largely designed with a view to strengthening the coherence and consistency among the different key components (Rambøll, 2011). However, as in many OECD countries, the different components of Denmark's evaluation and assessment system do not yet form a coherent framework.

Governance

Denmark's approach to evaluation and assessment combines a central legal framework specifying evaluation requirements and Common Objectives in compulsory education, with clear responsibility for school owners (municipalities and private school boards) to ensure quality control within this framework. Municipalities enjoy autonomy in designing their quality assurance practices[7], specifying the local objectives and determining local guidelines for their schools. School principals are responsible for school-level administrative and pedagogical policies and are accountable to the municipality (public schools) or the parent-elected boards and the Quality and Supervision Agency (private schools). The publication of Form 9 final examinations and grades serves as an accountability mechanism for all schools offering compulsory education.[8]

7. Although municipalities are required to draft and publish an annual quality report including a set of mandatory indicators, they can choose to add locally relevant indicators, and are entirely free in how they choose to organise follow-up of low performing schools and appraisal of school leaders.

8. With the exception of some private schools that have informed the Minister of Education that they will not conduct final examinations (see Chapter 4).

Key components

In a nutshell, the Danish approach can be described as consisting of the following four components (adapted from Rambøll, 2011):

- **Student assessment:** The long-established approach to student assessment in Danish compulsory education involves school and/or teacher developed assessments, strengthened in 1993 by the legal requirement for teachers to ensure a continuous assessment of student learning. The national Common Objectives for compulsory education (2003) form the basis of student assessment and comprise end objectives (in Form 9) as well as objectives for different forms and subjects throughout compulsory education. Policy initiatives since 2006 have sought to introduce summative assessments for students in compulsory education, including: mandatory school-leaving examinations in Form 9; and national tests (2010) for different subjects in Forms 2, 3, 4, 6, 7 and 8 based on the respective form-level Common Objectives. Further, mandatory 'Individual Student Plans' aim to document student learning progress more systematically.
- **Teacher appraisal:** There are no national requirements for teacher appraisal. This is conducted on a voluntary basis and practices are defined locally, usually by the school. The major tradition is for teacher self-appraisal and also feedback from school principals. Teacher appraisal remains very much an internal school matter. The former School Agency presented tools for teacher appraisal to help stimulate this practice. According to Danish teacher reports in an international study (TALIS), appraisal by an individual or body external to the school is not common practice and is much rarer than in other countries.
- **School evaluation:** External school evaluation is the responsibility of the municipalities for public schools and the Quality and Supervision Agency for private schools. There was a major initiative to introduce a quality assurance system in 2006 with the requirement for municipalities to produce an annual quality report, including information on schools in their jurisdiction compiled by the schools. Each report must include a standard set of indicators, but can include additional, locally specified indicators also. Little is known about school internal evaluation practices in Denmark and this is reported to vary significantly among different municipalities and schools. Tools for use in school self-evaluation are provided centrally by the Quality and Supervision Agency.
- **System evaluation:** Evaluation of compulsory education as a whole in Denmark has been heavily reliant on information provided via international assessments. Results from such external studies – notably the OECD's PISA 2000 and 2003 surveys – have led to increased demand for information on the compulsory education system. Since 2006, significant attempts have been made to produce national information on outcomes in compulsory education. The results of mandatory school-leaving examinations and final grades in Form 9 are published by school and municipality. December 2010 saw the publication of the first 'national profile' showing average results for Danish public-school students in the national tests and designed to measure national progress over time.

3.2 Strengths and challenges

Strengths

Increased focus on improving educational outcomes and the role of compulsory education

The Prime Minister firmly believes that the continuous improvement of skills is the key to growth in the Danish economy and in particular highlights the crucial role for the *Folkeskole* in achieving this. The Prime Minister's Office issued goals and an agenda for 'Denmark 2020' in which one of the ten major goals is for Danish children to be among the best performing in the world – specifically for them to be in the top five in PISA surveys and also in 'English measured in relation to non-English speaking countries' (Danish Government, 2010). In October 2010 he presented seven objectives for the *Folkeskole* with an aim to ensure that Danish students achieve these goals. In December 2010, these were set out in a reform package, which highlights the key role of school leadership and teachers in improving results.

Much of this heightened political focus on improving educational outcomes stems from the Globalisation Council (established in 2005) recognising the key role of education in confronting the challenges of globalisation and keeping Denmark internationally competitive. The most recent Competitiveness Report (Danish Ministry of Economic and Business Affairs, 2009) presents 16 areas of significance to competitiveness, including 'primary and lower secondary education', 'upper secondary education' and 'higher education'. Key indicators for 'primary and lower secondary education' include results from PISA, both average performance in reading, mathematics and science, and a focus on the proportions of weak and capable students and student attitude to collaboration.

Strong political will to establish an evaluation and assessment framework

Denmark deserves credit for the high ambitions it holds for the school system and the policies and strategies adopted in the last decade to improve the performance of schools and the standards achieved by children and young people. The raft of measures intended to improve assessment and evaluation at all levels from the student to the system itself have done much to stimulate public awareness of assessment and evaluation and begin the process of embedding an evaluation culture throughout the teaching profession. In particular, the creation of a specific national authority to monitor compulsory education (the Quality and Supervision Agency, formerly the School Agency) and an advisory body to evaluate priorities in compulsory education (the School Council) sent a strong signal that evaluation is a top priority.

At the local political level (the municipalities) there is also growing support for establishing an evaluation culture. Notably, Local Government Denmark (KL) ran a partnership study with 34 municipalities on the evaluation culture, management and professionalism in inclusive education during the period 2007-2009 and has placed student performance and results on the political agenda (KL, 2009). The overall aim of the partnership was to strengthen students' learning outcomes and as such the study was based on research and studies to investigate which factors affect student learning. The partnership noted heightened political engagement in school communities.

Common Objectives for compulsory education provide a basis for student assessment and evaluation

The overall objectives of compulsory education in Denmark are specified in the respective legal acts for public and private schools. These are: to provide students with professional skills, to help students develop as independent individuals, and to prepare them for their role as citizens in a democratic society. Binding national Common Objectives were developed in 2003 and must be used in all schools. Common Objectives specify the skills and knowledge that 'teaching should lead towards' by the end of compulsory education in a given subject (end objectives) as well as at different stages of compulsory education (form-level objectives). Even in private schools where there is freedom to adapt these, there is a requirement for each school to set clear end and form-level objectives and for there to be a comparable education to students in the *Folkeskole* to ensure equitable access and preparation for upper secondary education. Thus, it can be said that there is a basis for common expectations of outcomes from compulsory education in Denmark and – it follows – a common basis for evaluation and assessment of student learning progress against these.

Central and municipal efforts to guide schools on evaluation and assessment activities

National bodies have made concerted efforts to build up a knowledge base and guidelines on evaluation and assessment activities. The Ministry of Education's Common Objectives include guiding curriculum for all courses and subjects in compulsory education. The former School Agency's *Evaluation portal* provides a plethora of evaluation and assessment tools for use by teachers, schools and municipalities. There are efforts to stimulate capacity building from EVA via its 'EVA days' during which municipalities learn about how to draw up quality reports and put these to best use and from the Quality and Supervision Agency's work with facilitating knowledge flow on experiences and approaches to evaluation among the municipalities.

In addition, some municipalities send out local guidance materials on good evaluation practice to schools. Local Government Denmark (KL) launched a partnership with 34 municipalities to promote and evaluate efforts on developing an evaluation culture, among other things (see above). Many municipalities have provided information to the Quality and Supervision Agency's central repository on municipal quality assurance.

Increased support for the use of evidence and research to inform evaluation and assessment policies

For more than a decade, EVA has conducted evaluations of compulsory education which have often led to increased political debate about issues identified (Rambøll, 2011). Notably, the EVA (2005) evaluation identifying that municipalities did not systematically use school performance data or follow-up on school performance, highlighted the need to introduce a mandatory evaluation instrument for municipalities. The School Council, as part of its mandate to monitor the academic level in the *Folkeskole*, commissions research and evaluation studies. The latter often include studies on the implementation and use of new national evaluation and assessment tools, *e.g.* Individual Student Plans and municipal quality reports and have led to considerations and pilots of how to make such tools most relevant to local needs. One of the ten major challenges identified by the School Council for the '*Folkeskole* 2020' is to strengthen the

systematic exchange of knowledge between research institutions and schools to promote school use of knowledge to improve teaching (Skolerådet, n.d.). The School Council aims to collect and disseminate research results to support the formation of policies for school improvement. Further, the Government's reform proposal in December 2010 includes provision for more money for research.

Students are increasingly at the heart of the evaluation and assessment framework

The major focus of many national evaluation and assessment initiatives is the assessment of student progress. The high political goals are to increase overall and relative student performance in international assessments. Students should benefit from continuous assessment from their teachers (legal requirement since 1993) and teachers should use the Individual Student Plans to document their assessment of student progress against the Common Objectives in compulsory education. Such plans, furthermore, should create a more structured dialogue between students and their teachers and offer the possibility to open up student self-assessment on a more regular basis. The plans also support discussions with students' parents on their learning progress.

The national tests are designed to offer robust measures and rapid feedback to teachers on student knowledge and skills in discrete, testable areas of the Common Objectives. The nature of the test is adaptive, which means that the test adapts to the individual student to heighten the relevance and diagnosis for that particular student's learning. Each student would have a different test experience answering different questions depending on his/her ability.

Students have the right to choose their pathway into upper secondary education and the final examinations and their overall final grades in Form 9 serve to document their learning. In the final certificate, students can request that other information be included on the certificate, *e.g.* the descriptive assessment of their final project and comments from teachers in subjects where there are no final examinations offered.

The Association of Danish Students has an official seat on the School Council and its views are well respected at the political level. Further, the 'Student Council' is a prominent feature in the Danish *Folkeskole* and offers students an official platform to express their views on what's happening in their schools. Seventy per cent of these Student councils are represented by the Association of Danish Students.

A culture of trust in the professionalism of all actors, consultation and openness to flexible, local solutions

At the heart of the Danish compulsory education system is a strong trust in the professionalism of all actors and a culture of consultation and dialogue. Following the OECD (2004a) recommendations on the need to establish an evaluation culture, all major stakeholder groups formed broad agreement on the importance of working to this end. Stakeholders worked together in a number of groups set up by the Minister of Education to come to agreement on how to follow up on the OECD recommendations and these were documented in "The *Folkeskole*'s response to the OECD". The School Council comprises members of all major stakeholders that meet twice a year officially to discuss and contribute to the School Council Chairmanship's deliberations. During one such meeting, the School Council Chairmanship's annual report is discussed and stakeholder views expressed during the discussion are documented in an annex to the report.

In spring 2008 a national agreement was made between Local Government Denmark and the Danish Union of Teachers and the Confederation of Teachers Unions to introduce more flexibility in working hours for teachers in the *Folkeskole*. The philosophy behind the agreement is that 'teachers should be responsible for independently and professionally carrying out the overall teaching task, and that leaders should have space to lead, set goals and frameworks, and to show the way for teachers' independent, professional work'. However, a common feature in many *Folkeskole* is the use of teacher teams to promote collective planning, learning and knowledge sharing (Rambøll, 2011). Plus, the *Folkeskole* often include staff with particular expertise and roles to offer targeted support and/or build school capacity in certain fields (EVA, 2010).

Finally, the Ministry of Education relies on both dialogues with stakeholders and evaluation to verify the implementation and use of various central policies. For example, based on stakeholder feedback, the Ministry of Education is open to reducing the perceived bureaucratic burden of some of the national evaluation tools, *i.e.* the Individual Student Plans and the municipal quality reports, in order to maximise their effective use by stakeholders for school improvement.

Use of information technology to gain efficiency in student assessment

The World Economic Forum (2009) ranked Denmark as the leading information technology nation in the world. The new national tests are entirely computer-based and capitalise on the efficiency of automatically scored student answers and rapid diagnostic feedback to students' teachers. The use of an electronic platform to communicate the national test results to teachers and schools also enables teachers to set up their own analytical tools within the platform and gives greater possibility for professional use of the results to follow individual students, groups of students, classes, the effect of particular teaching strategies, etc. (see Chapter 4). Digital examinations are also being introduced in selected science subjects for the school-leaving examinations in Form 9. In fact, Denmark was one of three OECD countries to pilot a computer-based assessment in science as part of the PISA 2006 study (along with Iceland and Korea) and as such helped lead the way in developing this medium in international studies (OECD, 2010f).

Challenges

The evaluation and assessment framework is incomplete

While the measures introduced in 2006 have helped to kick start an evaluation culture throughout the public compulsory education (*e.g.* Skoleradet, 2010), the evaluation and assessment framework is not yet complete. Some of the key components of the framework are underdeveloped:

- *Evaluation of municipalities*: Municipalities have responsibility for public schools, including setting the local framework and goals, and monitoring and promoting school quality. Following the introduction of municipal quality reports, there is a common set of information ('quality indicators') available to the Quality and Supervision Agency for compliancy checking, but the content of such reports does not sufficiently speak to quality issues (Chapter 6). Further, there is no systematic overview of the existing municipal quality assurance systems and municipal follow-up with underperforming schools and the Agency's supervision role could be strengthened (Chapter 7).

- *School internal and external evaluation*: Municipalities are responsible for the external evaluation of the *Folkeskole*. Municipal approaches and capacity to undertake school evaluation vary considerably and central expertise on school evaluation is limited to the private sector. Similarly, there is great variation in school use of self-evaluation, despite efforts to promote this by providing training (*e.g.* EVA days) and self-evaluation tools on the *Evaluation portal*. There are no legal requirements for schools to conduct internal evaluations. The Chairmanship of the School Council (Skolerådet, 2009) reported that 70% of school leaders expressed the need for increased competence development in evaluation, strategic development and quality assurance and development.
- *Teacher appraisal*: Teacher appraisal is entirely determined at the local level and there are no national requirements for the evaluation of teacher performance or teacher professional development (see Chapters 5 and 6).
- *School principal appraisal*: There is no systematic approach to the appraisal of school principals and the OECD review team found little expectation that school principals are accountable for the quality of teaching and learning in their schools (see Chapter 6). In the absence of national requirements, this varies significantly among different *Folkeskole* (Rambøll, 2011). Although there is evidence that school principals are being held increasingly accountable for their school quality. For example, some municipalities have started to introduce results-oriented short-term contracts for school principals (Rambøll, 2011).

The OECD review team also noted some areas where complementarities among the key components of evaluation and assessment could be established or strengthened more systematically:

- *Teacher appraisal and school evaluation*: No attention is paid to the core processes of the quality of teaching and learning in the current municipal quality reports (see Chapter 6), so there is no guarantee that external school evaluation by municipalities addresses teacher appraisal practices. Equally, school self-evaluation does not necessarily place adequate emphasis on how appropriate teacher appraisal and follow-up mechanisms are (see Chapter 5).
- *School evaluation and school improvement*: The municipal quality reports serve as a major tool in external school evaluation, but do not sufficiently speak to quality and improvement, with for example, a lack of focus on school self-evaluation and teacher appraisal (see Chapter 6).
- *National student assessment tools and formative assessment*: The national tests provide rapid diagnostic feedback to teachers on student performance in discrete areas against the Common Objectives. The key is to ensure that such information feeds into a discussion with students on their future learning plans. Equally, ISPs serve to document student learning, but should also feed into a discussion of student future learning needs and goals (see Chapter 4).
- *Teacher appraisal and school improvement*: School development needs should be systematically linked to teacher professional development activities. Considerable benefits can be obtained through a better alignment of teacher professional development in areas of priority in overall school improvement plans (see Chapter 5).

- *Teacher developmental appraisal and school principal appraisal*: There is no mechanism to guarantee the systematic application of teacher developmental appraisal by school principals, nor to hold school principals accountable for this (see Chapter 5).
- *Feedback from national evaluations/research into initial teacher education*: Despite the major political focus on establishing an evaluation culture in compulsory education, there is a lack of emphasis on student assessment and school self-evaluation in initial teacher education programmes.

Private schools are not integrated in the evaluation and assessment framework

There is specific legislation for private and public schools. Most of the 2006 policy initiatives to strengthen the evaluation culture in compulsory education do not apply directly to private schools. While private schools have to demonstrate similar conditions for student assessment in as much as they must provide end objectives and educational descriptions of how students will reach these, evaluate the student's learning outcomes and communicate this with parents and evaluate the school as a whole on a regular basis, they have considerable freedom in how they do so. Private schools are not required to use the Common Objectives, ISPs or national tests. Further, they may opt out of administering final examinations in Form 9 by officially informing the Ministry of Education. The parents hold the primary responsibility for supervising the educational quality in private schools. Private schools choose between self-evaluation and a parent-elected certified supervisor. The private schools are accountable to supervision by the Ministry of Education, specifically, the Quality and Supervision Agency. The risk of a limited integration of the private sector in the framework is that there is little guarantee that their evaluation and assessment procedures are sufficiently aligned with national student learning objectives.

The implementation and assessment of Common Objectives varies among schools and municipalities

Currently, Common Objectives vary in their coverage in different subjects and level of detail provided for teachers. The form-level objectives are few in some subjects – indeed in some there are only end objectives provided. Despite the revision of Common Objectives in 2009, teachers still report concerns with translating these into curriculum and assessment plans (see Chapter 4). This reported lack of shared understanding of the Common Objectives leads inevitably to a variation in their implementation and use by teachers. Currently, beyond the final examinations in Form 9, there are no grading criteria/assessment exemplars for teachers in understanding how to assess the student understanding of knowledge and skills specified in the Common Objectives. While the availability of national tests in Danish, English, mathematics, geography, biology and physics/chemistry will prove a considerable asset to teachers in assessing student progress against the Common Objectives, these form only a minor part of expected assessment of student progress in compulsory education.

The level of oversight and support by municipalities in ensuring that schools effectively achieve the Common Objectives varies significantly (see Chapter 6). Not all schools draft guidelines on evaluation for their schools and only a minority employ evaluation advisors to offer specific support to schools in developing their evaluation and assessment practices. The basic template for municipal quality reports may include some

results on Form 9 final examinations and grades, but beyond that offers no information on the achievement of Common Objectives and only includes descriptive information on the continuous assessment of student outcomes. Further, whilst the public sector reform in merging several smaller municipalities may offer the opportunity to strengthen monitoring capacity of schools in the municipal councils, not all may include a distinct education office and there are no standard competency requirements or even a competency profile for such municipal officials.

A need to radically improve evaluation and assessment competencies throughout the system

Whilst there have been considerable national efforts to stimulate an evaluation culture by introducing assessment and evaluation activities, guidelines and materials, as well as providing competency-building seminars in some cases, the OECD review team assesses that there are still limited evaluation and assessment competencies throughout the compulsory education system. At the national level there is under-used capacity to monitor effectively municipal approaches to evaluation and assessment (Chapter 7). An exchange of practices via the Quality and Supervision Agency reveals that there is great variation in the capacity for municipalities to develop and effectively use quality assurance systems. To shed more light on this issue, the School Council has commissioned EVA to evaluate municipalities' capacity to follow up particular schools with action plans as determined in the quality reports. Similarly, there is a need to increase school leader competencies in evaluation and assessment, in particular with regard to ensuring a school self-evaluation process, including teacher appraisal and teacher observation by school leaders and/or peers (Chapters 5 and 6). Initial teacher training lacks a specific focus on student assessment and given teacher reports on the lack of clarity of Common Objectives, it is probable that there is great variation in their capacity/approach in awarding students their overall Form 9 grades upon completion of compulsory education, plus in their capacity to work effectively with the national tests results (Chapters 4, 5 and 7).

Need to engage all stakeholders and achieve consensus on the evaluation and assessment framework

In going further with building the evaluation culture in compulsory education, it is critical to engage all stakeholders in this effort. While there was general agreement with the OECD (2004a) diagnosis of a need to improve educational outcomes and to ensure continuous assessment of students, key stakeholder groups were not in complete agreement with some of the national initiatives introduced in 2006 (Rambøll, 2011). Ongoing evaluations of municipal quality reports and ISPs aim to address some concerns raised by key stakeholder groups and evidence from EVA evaluations indicates that these tools are widely accepted and used by stakeholders. Certainly, there is strong support from students and parents for the ISPs (Rambøll, 2011; OECD review interviews). The OECD review team highlights the need to heighten efforts to engage teachers in the effective use of national test results and identifies a lack of clarity on the purpose of the national tests as a significant risk to both their pedagogical and monitoring value (see Chapters 4 and 7).

3.3 Pointers for future policy development

In order to strengthen the overall framework for evaluation and assessment (each component will be discussed in more detail in the succeeding chapters), the OECD review team proposes the following approaches for Denmark to consider:

- Develop a strategic plan to complete the evaluation and assessment framework;
- Improve the integration of private schools in the evaluation and assessment framework;
- Strengthen central support and clarify key purposes and objectives of evaluation and assessment;
- Significantly invest in evaluation and assessment capacity development across compulsory education.

Develop a strategic plan to complete the evaluation and assessment framework

The OECD review team commends the national and local efforts to establish an evaluation culture in Denmark. To go further, it would be important to develop a strategic plan to complete the evaluation and assessment framework. An effective evaluation and assessment framework would: include key components that are currently missing (the evaluation of municipalities, the evaluation of school leaders and teacher appraisal); achieve proper articulation between the different evaluation components (*e.g.* school evaluation and teacher appraisal); ensure that the different elements within an evaluation component are sufficiently linked (*e.g.* ISPs and national test results are linked to formative assessment); and ensure processes are in place to guarantee the consistent application of evaluation and assessment procedures (*e.g.* consistency of teacher grading in Form 9 and consistency of municipal quality assurance systems).

For example, it would be critical to ensure that the evaluation of teaching and learning quality is central in the evaluation framework. To this end, there is room to better define the articulations between school evaluation and teacher appraisal, teacher developmental appraisal and school principal appraisal, teacher professional development and school development, etc. This indicates that school evaluation should comprise the monitoring of the quality of teaching and learning, possibly include the external validation of school-based processes for teacher appraisal (holding the school principal accountable as necessary), and school development processes should explore links to the evaluation of teaching practice (see Chapters 5 and 6). In the context of school self-evaluation, it is also important to ensure the centrality of the evaluation of teaching quality and the feedback to individual teachers.

Examples of linkages within single evaluation components which need to be reinforced include the association between teacher appraisal and teacher professional development (see Chapter 5), the articulation between school self-evaluation and external school evaluation (see Chapter 6) and the relationship between ISPs and national tests and student formative assessment (see Chapter 4).

Finally, moderation processes are vital to ensure the consistency of the application of evaluation and assessment procedures. Priority should be given to ensuring that there is heightened consistency among municipal quality assurance systems and that these focus adequately on the quality of teaching and learning (see Chapters 6 and 7). Further, there is room to build on the existing system of moderation of final

examinations to ensure greater consistency in teacher grading of overall student achievement in Form 9. The development of a nationally agreed set of teaching standards would also aid and promote a more consistent approach to the appraisal of teachers.

Improve the integration of private schools in the evaluation and assessment framework

Evaluation and assessment practices in private schools are very diverse and, with the exception of the final examinations in Form 9, display limited alignment with those in the *Folkeskole*. As a result, there is limited guarantee that those practices are aligned with the Prime Minister's national agenda.

At the system level, and in order to monitor the performance of private schools, consideration could be given to a requirement for private schools to administer the national tests and to participate in evaluations undertaken by EVA.

Further, it would be important to engage private schools in the process of further refining the Common Objectives and developing a set of performance standards against these (see below).

Strengthen central support and clarify key purposes and objectives of evaluation and assessment

Now that the major centrally-designed evaluation tools have all been introduced to the *Folkeskole* (and mandatory examinations to private schools), there is considerable need to strengthen central support to ensure that these tools are linked to effective classroom practices. It should be clearly communicated that the purpose of such evaluation tools is to improve educational outcomes and that stakeholders should actively use these to develop strategic improvement or action plans at all levels.

The Ministry of Education should start work with key stakeholders to:

- Refine and expand the Common Objectives and to develop a set of performance standards against these (see Chapter 4). These refined Common Objectives and performance standards would serve as the basis of student assessment and school self-evaluation.
- Develop evidence-based teaching standards to aid teacher appraisal, development and career progression (see Chapter 5).
- Draw up competency profiles for school leaders and municipal education officers (see Chapter 6).

At the same time the Quality and Supervision Agency should continue to:

- Build up central information available on the *Evaluation portal* and – importantly – to ensure that such materials are aligned with the Common Objectives. Also, there should be adequate examples of student work against the performance standards. Such performance standards and example materials will help to operationalise the political goals to significantly improve student outcomes.

- Develop and improve central evaluation tools, notably, with work to modernise the final examinations for students in Form 9. In answering the calls to modernise these examinations, adequate attention should be paid to their role in signalling the expected outcomes at the end of compulsory education in Denmark, ensuring that these both reflect the breadth of outcomes and clarify the type of skills desired.

A major part of strengthening central support and ensuring adequate links between the central evaluation and assessment tools and classroom practices is to significantly invest in capacity development at all levels (see below).

Significantly invest in evaluation and assessment capacity development across compulsory education

Since 2006, Denmark has introduced a raft of evaluation and assessment tools into compulsory education – all of which are mandatory for public schools. In this context, the top priority is to significantly invest in capacity development across the compulsory education system to ensure the effective use of these and other evaluation and assessment measures by stakeholders. The effectiveness of the overall evaluation and assessment framework depends to a large extent on whether those who evaluate and those who use evaluation results at the different levels of the system have the appropriate competencies. It is natural that the introduction of new evaluation and assessment requirements necessitates training and capacity building at different levels – and Denmark has made some efforts to this end. However, there is room to significantly develop capacity, as follows:

- *Develop teacher capacity to assess and engage their students in assessment*: Prioritise professional development and teacher networking to build teacher capacity in both formative and summative assessment; develop, with teachers and teacher educators, a set of performance standards against the Common Objectives and provide sample assessment materials aligned with these; continue efforts to ensure teachers' effective use of results from the national tests and promote the use of ISPs and classroom assessments to engage students in their self-assessment and assessment of peers; go further with current moderation approaches by building wider professional networks with an aim to improving teacher capacity to award students' final grades in Form 9 against the Form 9 end objectives; at the same time, strengthen and make more explicit the development of teacher skills in formative and summative student assessment in initial teacher education programmes.
- *Develop school leader and leadership team capacity in school self-evaluation and teacher appraisal*: Train school leaders to implement an authentic evaluation of teaching and learning, feedback and objective setting at their schools, including techniques in teacher observation; strengthen teacher developmental appraisal at schools by preparing the school leader, management teams and lead teachers for particular evaluation responsibilities and engaging evaluation advisors.
- *Develop municipal capacity in school evaluation, with particular focus on the evaluation of teaching and learning*: Replenish central evaluation expertise in EVA to support capacity development at the municipal level; promote municipal partnerships to develop evaluation capacity (in the mode of KL's 2007-2009 partnership); identify examples of effective municipal quality monitoring systems

and promote these throughout the system; ensure municipal school review pays attention to internal school processes to improve teaching and learning, including developmental appraisal of teachers.

- *Strengthen central capacity to monitor municipal evaluation frameworks*: Evaluate the value and impact of quality reports; strengthen the monitoring of municipal evaluation frameworks and ensure they include an evaluation of the quality of teaching and learning; at the same time – and of critical importance – increase central capacity to support and build evaluation capacity in municipalities and schools.

All of the above points are expanded in Chapters 4 to 7.

Chapter 4

Student Assessment

Teachers and students report using an admirable mix of different assessment methods in Danish classrooms. However, teachers and schools report difficulty in translating the Common Objectives into instructional and assessment plans. There is room to develop performance standards against these to promote more consistent implementation and a more active engagement of students in their own assessment. New national tests offer a powerful pedagogical tool to teachers, but they are not yet used effectively by all teachers. To maximise their pedagogical value, they should be further validated, while building teacher assessment competencies. Teachers carry the major responsibility for student summative assessment at the end of compulsory education which allows a broad overview of student achievement. The written and oral standard examinations in Form 9 are criticised by students and others as being 'outdated' and students are not able to sit examinations in all subjects that they study. Accordingly, there should be a review of the purpose, procedures and content of the final examinations.

This chapter focuses on approaches to student assessment within the Danish evaluation and assessment framework. Student assessment refers to processes in which evidence of learning is collected in a planned and systematic way in order to make a judgement about student learning (EPPI, 2002). This chapter looks at both summative assessment (assessment *of* learning) and formative assessment (assessment *for* learning) of students.

4.1 Context and features

The approach to student assessment in Danish compulsory education

The major tradition for student assessment in Denmark has been on school and/or teacher developed assessments and ongoing assessments at the class level (Rambøll, 2011). Since 1993, public schools have been legally obliged to provide an ongoing assessment of student learning outcomes. But student assessment has very much been determined by the individual school and therefore, there has not been a typical Danish approach to student assessment in compulsory education. Prior to 2006, the tradition for summative assessment was very weak. A first significant attempt to introduce a common basis for student assessment in compulsory education was the introduction of mandatory national Common Objectives in 2003 (these were revised in 2009). Such objectives detail the knowledge and skills that 'teaching should lead towards' by the end of compulsory education (Form 9) and also progressively through key stages of compulsory education (see Form level objectives in Table 4.1). They are not a national curriculum *per se*. Rather, they are intended to provide a framework for the curriculum. The absence of a national curriculum in Denmark reflects the traditional belief that qualified teachers should own their curricula and syllabi (Egelund, 2005). The legislation states that municipalities should specify and supervise learning targets and frameworks for pedagogical activities (Rambøll, 2011).

There were major efforts in 2006 to strengthen educators' use of Common Objectives for ongoing student assessment by introducing externally-determined elements of student assessment into Danish classrooms:

- *Form 9 leaving examinations were made mandatory*: Upon the completion of Form 9, Danish students are required to take mandatory school leaving examinations. The examinations assess the extent to which students have achieved the end objectives for compulsory education, cover a wide range of subjects taught, and use multiple assessment methods including oral, written and project-based assignments. Each student must sit seven examinations: five fixed (written and oral in Danish, written in mathematics, oral in English and physics/chemistry) and two randomly selected from each of the major study blocks of humanities (written in English, history, social studies, Christian studies, and written and oral in the optional subjects of French or German) and science (geography and biology). All written examinations are marked by the students' teachers using national scoring guidelines and an external censor from the State (or in the randomly selected subjects of English, French or German usually a censor from a different school or municipality). All oral examinations are marked

by the students' teachers using national scoring guidelines and an external censor from a different school or municipality or – as a sample – from the State.[9]

- *Computer-based adaptive national tests*: these were officially implemented in the *Folkeskole* in March 2010 after a long period of development and pilot tests since 2006. A number of compulsory multiple-choice tests are included in this IT-based testing system: Danish (Forms 2, 4, 6 and 8), mathematics (Forms 3 and 6), English (Form 7), biology, geography and physics/chemistry (Form 8). The test system is adaptive in that the items are tailored to students' latent ability levels. Test items are selected sequentially according to a student's performance on the previous test items: if the student answers the question correctly, he/she gets a more difficult question; if the student's answer is incorrect, he/she gets an easier question next, etc. These efficient national tests provide rapid feedback of test results to teachers the next day, which can greatly facilitate teachers' use of the test results.
- *Individual student plans (ISPs):* These are compulsory working tools for teachers to document their evaluation of each student's learning outcomes in all subjects, including a summary of each student's test and evaluation results (although national test results are not included, only notes on how these will be followed up). Teachers are obliged to write individual student plans at least once a year for all students in Forms 1 to 7. ISPs are combined with student learning plans in Forms 8 and 9.

However, attempts to introduce a national influence on student assessment have mainly impacted the public schools, as in Denmark, the legal framework – and therefore practices – for student assessment differ between public and private schools. There are distinct legal acts for the *Folkeskole*, Private Independent Schools and Lower Secondary Boarding Schools. Private schools can choose to develop their own end objectives (in similar areas to the national Common Objectives): they must develop curricula that describe student development towards these in each Form and subject, as well as the student's personal development; they must specify the form-level objectives at certain times in the lesson plan for Danish, mathematics, English, geography, biology and physics/chemistry. The *Folkeskole* are obliged to conduct both the national tests and the school leaving examinations in Form 9. Private schools are obliged to conduct evaluations of student learning outcomes, however, they enjoy a higher freedom than public schools in how they do so. For example, private schools can inform the Ministry of Education that they will not conduct the mandatory school leaving examinations in Form 9 – 28 schools have currently chosen not to administer Form 9 examinations (Rambøll, 2011) – or can opt out of particular subjects (Christianity and history) if these do not match the school values, but students instead must sit another examination in the humanities block.[10] However, in practice the vast majority of private schools do administer the Form 9 school leaving examinations. With regard to the national tests these are not compulsory for private schools.

9. It is of note that students can also sit final examinations in Form 10, but that these are voluntary.

10. See for example the Law for Private Independent Schools, Article 8A, paragraphs 3 to 6 *www.retsinformation.dk/Forms/R0710.aspx?id=132522#K2a*.

Table 4.1 Common Objectives, national tests and final examinations in Danish compulsory education

	Form									
	1	2	3	4	5	6	7	8	9	10
Humanities										
Danish		F		F		F			F/E	E
English				F			F		F/E	E
Christian Studies			F			F			F/E	E
History				F		F			F/E	
Social Studies									F/E	E
French							F		F/E	E
German							F		F/E	E
Sciences										
Mathematics			F			F			F/E	E
Natural Science/Technology		F		F		F/E				
Technology									E	
Geography								F	F/E	
Biology								F	F/E	
Physics/Chemistry								F	F/E	E
Practical/Music Subjects										
Physical Education		F			F		F		F/E	E
Music		F		F		F/E				
Art		F			F/E					
Needlework				E	E	E	E			
Woodwork				E	E	E	E			
Home Economics				E	E	E	E			

Note: Dark shading denotes that the subject is not offered in the given Form. 'F' indicates form-level objectives and 'E' end objectives. Shading in Form 9 indicates final examinations: all students are examined in subjects with solid light shading; students are randomly selected for examination in two subjects with diagonal shading (one from sciences and one from humanities, French and German are optional subjects). Horizontal shading in Forms 2 to 8 denotes a national test.

National initiatives and formative assessment

National Common Objectives for compulsory education should offer the basic framework against which teachers conduct ongoing assessment of their students' learning outcomes and progression. The national tests are designed to test key areas of these Common Objectives and therefore provide teachers with an effective and free diagnostic tool with rapid feedback on how well their students understand a discrete area of the Common Objectives in a given subject and Form. Such information is to be complemented by regular teacher assessment. While the national test results for

individual students remain confidential and are not included in Individual Student Plans, documentation of learning plans following results in these tests is. An evaluation in 2008 revealed that the majority of teachers (74%) use ISPs to document student progress toward form/end objectives (EVA, 2008). As such, ISPs have the potential to introduce the critically important aspect into Danish compulsory education of the recording and tracking of students' learning progress. The tradition of students not receiving formal grades before Form 8 and oral feedback from teachers has been an obstacle to such documentation in the past.

National initiatives and summative assessment

The major summative assessment of each student comes at the end of compulsory education. At the end of Form 9 each student receives a Diploma containing the following key assessment information: most recent teacher ongoing assessment mark (the student's attainment level); results on the school leaving examinations in Form 9 (five fixed and two selected); and teacher assessment in the subject 'Physical Education'. Further, the student can request for additional information to be included in the Diploma, for example: the written teacher remarks and/or grades for the mandatory project assignment and for the optional assignment; the written teacher reviews on other subjects not tested in the final examinations.

Individual Student Plans serve a summative function (in addition to a formative function) as they record student achievement in a systematic way (Madaus and Kellaghan, 1993). ISPs serve as a tool to communicate to parents a teacher assessment of where each student stands in relation to the Common Objectives. The ISPs also serve as a record of student achievement in each Form which can be shared with teachers in subsequent Forms. Such records are enhanced by the inclusion of student results on classroom tests (although do not include information from national tests). The national tests hold a summative aspect for students as their results serve as an indicator of how much they demonstrate they know on expected knowledge and skills in discrete, testable areas against the national Common Objectives. Beyond this, national test results provide some summative information at the national level (to be published as a national profile) and can be used to monitor outcomes at the municipal and school levels (see Chapters 6 and 7).

Support for student assessment available to teachers

Teachers use a number of standardised reading and mathematics tests for diagnostic purposes throughout the school year. Danish teachers have access to support and expertise on various aspects of schooling from resource individuals (usually teachers) employed at school (Rambøll, 2011). However, a study in 2009 revealed that special assessment/evaluation advisors are rare (only reported in 8% of schools) and typically lend support at the school level as well as to individual teachers (EVA, 2009a). There are also several support materials available to Danish teachers, including many different free assessment and evaluation tools offered by the Quality and Supervision Agency in its national *Evaluation portal*. For example, guiding materials on how to assess students in the final examinations in Form 9 prepared by the examiners and subject advisors of the final examinations, including advice, guidance and ideas for classroom teaching and also criteria for student evaluation and assessment in classroom activities. Support materials are also provided by municipalities and the Danish Evaluation Institute (EVA). These systems are in place to ensure both the efficiency and effectiveness of student assessment for formative and summative purposes.

4.2 Strengths and challenges

Strengths

Strong potential in teacher culture to optimise formative assessment practice

The OECD review team gained the impression that the predominant classroom assessment culture in the *Folkeskole* emphasises the diagnostic role of assessment in teaching and learning. This holds very strong potential for effective formative assessment practice, defined by the OECD (2005a) as the frequent assessment of student progress to identify learning needs and adapt teaching. Indeed, there is a legal requirement for continuous assessment of students' learning as a basis for further planning and organisation of teaching (*Folkeskole* Act § 13 paragraph 2). Traditionally, teacher feedback emphasises qualitative, descriptive comments on student learning progress, given the absence of grades before Form 8. Research evidence supports teachers providing descriptive comments rather than numerical or letter grades to young children, as students engage more productively in improving their work – students tend to ignore teachers' comments when numerical marks are also given (Black *et al*., 2004). During the OECD review, educators described several ways they make use of student assessment, including reports that: they assess students to gather information about learning needs and tailor instruction to meet the needs for students at various proficiency levels; they use daily instructional activities to identify students' strengths and areas of improvement; assessments provide opportunities to engage other teachers, parents and students in dialogue about future learning. Further, teachers voiced appreciation for the availability of various assessment tools, especially, for reading, spelling, and mathematics, and students voiced appreciation for teachers' feedback on their task performance.

Wide range of student assessment methods used by teachers

The inclusion of a mandatory project assignment in Form 9 is a positive signal to consider different methods of student evaluation and it is useful that students can request for this to be included in their final diploma. In addition, the OECD review team noted various admirable features of classroom assessment in Denmark as reported by the teachers and students, notably a mix of different assessment methods. Besides the use of a number of formal standardised tests for diagnostic, placement, and evaluation purposes in reading, spelling, and mathematics, teachers use various forms of alternative assessment to make students demonstrate the skills and knowledge they have mastered. For example, teachers reported the use of written essays and laboratory reports ('products'), role plays, experiments and presentations ('performance') and collections of student work ('portfolios').[11] These alternative assessment methods are easily integrated into instruction and can be used to assess both processes and outcomes of learning. Alternative assessments can assess creative and critical thinking skills that are necessary for knowledge transfer to real life.

11. Such a range of assessments using *product, portfolio and performance*, are also known as '3P assessments' and reflect an emphasis on assessing 'higher-order' thinking skills in authentic ways (Madaus and O'Dwyer, 1999; Stiggins, 1987).

A good mix of teacher judgement and standard examinations in the final diploma

Teachers are at the heart of student assessment in Danish compulsory education: there is legal provision for their role of continuous assessment of students throughout compulsory education and this continuous assessment represents the students' overall attainment mark in the final diploma at the end of Form 9. While other information is included in the final diploma, notably results on the school leaving examinations, the teacher's professional judgement carries most weight in summative assessment at the end of compulsory education. At the same time the final examinations are taken seriously by teachers and students. While students' teachers are still at the heart of the marking process, the standard format of the examinations, the common marking guidelines and the fact that a sample of examinations are marked by an external censor provides an equitable way to judge whether students have achieved the national Common Objectives.

National tests provide rapid feedback to educators on student performance against Common Objectives

One of the most significant changes in the *Folkeskole* since the 2004 OECD review is the national tests. They are now fully functional and impressively computer-based adaptive tests. The national tests assess students' academic achievement in select subject areas across Forms 2 to 8, and align the test content with prioritised form-level Common Objectives (see Table 4.1). The OECD review team assesses that the Quality and Supervision Agency's communication strategy shows a responsible and healthy attitude towards what the national tests can cover and what their strengths are. Official information on the national tests produced by the former School Agency clearly repeats the message that the national tests only measure a discrete area of student knowledge and skills and teachers should use a range of other tests to gauge student progress. For example, it is stressed that the Danish test only measures students' proficiency in reading and a wide range of key knowledge and skills in Danish teaching (*e.g.*, spelling, grammar, punctuation, cultural understanding, literary knowledge, ability to express oneself) is not tested. Educators are aware that the tests provide only a snapshot of students' achievement levels in select learning targets and subjects (Wandall, 2010).

At the same time, within a discrete area, the adaptive nature of the national tests provides a very accurate diagnosis of student performance and of course, this has the advantage of being aligned to the form-level Common Objectives. In a regular test, all students would be confronted with the same range of questions with varying difficulty. Depending on the student's ability, this could offer only limited information to teachers on their learning misconceptions or strengths and weaknesses in particular areas tested, *e.g.* a student may simply not answer many questions or give wrong answers. However, adaptive tests can provide much more meaningful diagnostic information to teachers as each student sits a different test including questions that are adapted to his/her ability level. This allows a more thorough feedback on student performance and sheds more light on the types of tasks they can perform. Indeed, initial pilots of the national tests revealed major performance differences among students in each Form[12]. National tests can offer

12. During the pilot, items were tested across different Forms. For example, mathematics test items for Form 3 were tested on students in Forms 1 to 5. Results revealed that the top 10% in Form 1 performed above the average level in Form 3 and the average in Form 3 was better than the lowest performing 10% in Form 5 (Wandall, 2010).

extremely useful diagnostic information to teachers in the context of increased demand on Danish classrooms to be inclusive.

The major value added for Danish educators is that they can receive rapid feedback from the national tests which fosters the use of the test results for adapting teaching and learning for individual student progress (see Box 4.1). This is in strong contrast to several national test systems where educators receive student test results several months after the test was administered. Further, there is potential for teachers and schools to track student progress in the test areas over time, as teachers can decide to administer the test to their students up to three times – one mandatory and two voluntary. Teacher questionnaires were sent to one-third of the schools in June 2010 and results indicate that four out of five teachers find the results useful in some way (*e.g.* for planning instruction, communication with parents, informed analysis) and a minority of teachers reported they had already used results to plan instruction (Wandall, 2010).

Box 4.1 Feedback to teachers on student performance in the national tests

The day after students sit the national tests, their teachers receive a confidential access code to view their students' results on line (the school principal can also view these results). Results are presented in different formats:

- Overview for teacher: an overview of the available results for the teacher's classes and student groups. Results appear as an overall score for each class within each profile area as well as an overall score – an assessment across the profile areas.
- All students: a summary of results and status for each student's scores in each profile area and a comprehensive assessment of each student.
- Individual students: information for individual students on their response (right/wrong/not answered/length of time taken to answer the task) on the test tasks in each profile area. For each task, general information is given on: task difficulty (on a scale of 1 to 5, with 5 being the hardest); topic area (core academic content); typical time students take to answer this task; where the task fits on the overall assessment scale (scale scores from 1 to 100).
- Teacher-specified groups: teachers can specify particular groups of students and see an overview of their results, *e.g.* for boys and girls, or for students following a particular teaching strategy/programme.

Such information allows teachers to confirm their professional assessment of students by identifying students who are consistently above or below average across profile areas or who have challenges or strengths in particular profile areas or topics. Such information can feed into teacher plans to tailor instruction to sufficiently stimulate or support further student learning. The teacher-specified groups function also opens up the possibility to track the effectiveness of different teaching strategies, particularly given the possibility for teachers to re-administer the test to students at up to two later periods.

Further, there is an option for teachers to print out a summary sheet for parents describing student performance on the test overall and by profile area. This aids communication of results to students' parents.

Source: Based on information on *http://evaluering.uvm.dk*.

Availability of assessment resources and supports

The former School Agency invested significantly to build an on line resource for teachers offering a range of assessment and evaluation tools (the *Evaluation portal*). Further, there is much information related to the national tests including articles on how teachers can interpret results in these tests and use these most constructively to adapt students' further instruction. Many of the official booklets on the Common Objectives go well beyond a presentation of the end and form-level objectives and suggested teaching plans and provide stimulus information on student evaluation. As such, they try to promote a teaching approach incorporating evaluation and assessment against the Common Objectives. For example: for natural science and technology, sample problems and associated teacher evaluation questions are provided for different stages of the class instruction, including learning goals, study plan and completion and evaluation; for Danish and mathematics general suggestions are provided on differentiating instruction and ensuring continuous assessment of students and inviting teachers to access materials on the *Evaluation portal*.[13] The *Evaluation portal* provides teachers with access to various assessment materials. These external resources are valuable material for teachers' classroom assessment. While these materials may not be aligned with the Common Objectives, they can contribute to establishing consistency in assessment practice in the *Folkeskole*. The OECD review team commends the former School Agency's efforts to create this rich support system for student assessment. Some teachers reported to the OECD review team that they found resources useful, especially when alternative project-based assessments were necessary to evaluate students' ability to transfer skills to other situations (*e.g.* science). Teachers' use of these resources is not yet consistently observed across classrooms and schools.

Recent policy initiatives to build teacher capacity in evaluation and assessment are commendable. The availability of resource teachers at schools provides important support to teachers. Although, assessment and evaluation advisors are few they have the potential to offer critical support to the majority of teachers whose initial training did not give particular emphasis to student assessment and evaluation (see Chapter 5). Thus, providing training to special resource teachers who are expected to consult with teachers in assessment practice appears to be an effective short-term strategy to build teacher capacity in this area. Test consultants and supervisors can collaborate with classroom teachers in planning, interpreting and using assessment.

National initiatives have stimulated teacher teamwork and teacher-parent co-operation

During the OECD review, teachers noted an increase in teamwork within school in developing instructional and assessment plans according to the national Common Objectives. Because the objectives are clustered into sets of forms, teachers' teamwork is crucial for scaffolding instructional targets across forms. Although some teachers reported a degree of concern about increased workload in preparing written documents, it was evident that recent assessment initiatives fostered teamwork among teachers.

13. For example, see Natural Science and Technology, *www.uvm.dk/~/media/Publikationer/2009/Folke/Faelles%20Maal/Filer/Faghaefter/090708_natur_teknik_12.ashx*.

The ISPs are well in accordance with the *Folkeskole* act that students and parents must be informed of student progress toward their learning targets on a regular basis. The OECD review team judges that the ISPs contribute to formalising Danish assessment practice by documenting students' learning progress for dialogue with key stakeholders. The positive feature of the Danish ISPs is their emphasis on the student's future learning rather than summative learning outcomes. Official evaluations, strong support from national level parent organisations and student associations (see Rambøll, 2011) and stakeholder feedback during the OECD review confirm that the ISPs are well received by parents and teachers. In short, parents appreciate a written summary of their child's progress because they feel that they are better prepared for their meeting with teachers. Teachers perceive benefit in transferring documented information on student achievement to subsequent teachers and as such ISPs play a crucial role in tracking individual students' developmental growth over time. Teachers recognise the role of ISPs in easing communication with parents. The added workload ISPs entail for teachers is a bone of contention, but there is a current pilot to allow educators more flexibility in determining and prioritising the content of ISPs. Depending on the evaluation of this pilot this may lead to a modified approach to drawing up ISPs.

Assessment for equity and inclusion

The Danish assessment culture is driven by the view of education for equity and inclusion. In this view, all children have their right to education and through this to achieve their learning potential. Inclusion is sought through 'responsive' education to various learning needs in optimal learning environments. Students are not treated differently based on their ability measured by tests. The *Folkeskole* must embrace all students regardless of their background and ability. During the OECD review, most stakeholders expressed their support for equity and inclusion. Research supports the Danish view that students who feel included and connected to the school community perform better in their academic tasks (Schargel, Thacker and Bell 2007). Some accommodations have been made in the national tests to make them more inclusive: alternative versions of the national tests were prepared for students with special needs and a special Danish test for bilingual students is offered. Denmark's focus on equity and inclusion should continue by implementing strategies to identify barriers and biases against fair student assessment.

Challenges

Many teachers struggle in translating Common Objectives into curriculum and assessment plans

The Common Objectives set the national educational goals and values by specifying the knowledge and skills that 'teaching should lead towards' by the end of compulsory education. They also include form-level objectives for the majority of subjects in compulsory education (although for some subjects there are only end objectives). The current Common Objectives were refined in the light of the new objective of the *Folkeskole* in 2009; however, during the OECD review several teachers still expressed concern about the lack of clarity and specificity in guiding curriculum development. This echoes a finding in the report by the 'Flying Squad' (Danish School Agency, 2010; see also Box 2.1) that 'the national objectives for the contents of the teaching are unclear, and it can therefore be difficult for schools and for the individual teachers to translate these into lesson plans and learning objectives'.

Common Objectives are not provided for every Form meaning that teachers need to translate the content of form-level objectives into an instructional plan over several different Forms. For example, in mathematics objectives for the Form 3 serve for Forms 1 to 3, objectives for Form 6 serve for Forms 4 to 6 and objectives for Form 9 serve for Forms 7 to 9. While this has the advantage of giving more ownership to teachers and bringing different Form teachers together to establish a coherent instructional plan, there seems to be a need for more structure for several teachers. The Common Objectives should play a key role in establishing the interdependent relationship among curriculum, instruction, assessment, and local instructional policies (Allington and Cunningham, 2002). National tests are aligned with the Common Objectives, but it seems reasonable to speculate that given reports from some teachers on the lack of clarity of Common Objectives, there would equally be a lack of alignment regarding the other much wider areas that should be regularly assessed. Research shows that misalignment among curriculum, instruction and assessment compromises student achievement (Baker and Linn, 2000).

In general, the Common Objectives provide core content standards that articulate the knowledge and skills that 'teaching should lead towards', but appear to lack performance standards that describe concrete learning goals that students should meet. The OECD review team is of the opinion that classroom-based assessment has not yet reached its fullest potential because rubrics that detail evaluation criteria for clear expectations and achievable targets for students are not common place. Clear rubrics can make teachers' assessment transparent and fair and prompt students' metacognitive reflection on their own learning process. They are used to define what constitutes excellent work in student assessment. In classrooms where teachers increasingly use '3P assessments' (performance, product, portfolios), teachers should be able to explain to students how good is good enough using rubrics that entail clear evaluative criteria and quality definitions (Popham, 1997).

Weak differentiated instruction and increased demand to make classrooms more inclusive

While there is a strong basis for formative assessment in Danish compulsory education, evidence on outcomes indicates that teachers may struggle with the second part of adapting their instructional strategies after diagnosis of student learning status. Crucially, evidence from the OECD's PISA assessments has repeatedly shown a comparatively low proportion of Danish students able to perform the most demanding assessment tasks (see Chapter 2). This suggests that high achievers are not adequately challenged and stimulated to bring forth their full academic potential in the *Folkeskole*. This is a key challenge if Denmark is to achieve its ambitious goal to be among the top five international performers and indicates a significant need to increase educators' use of assessment for planning and evaluating differentiated instruction.

At the same time there will be increased demands on teachers to make classrooms more inclusive and to effectively integrate many students who are currently offered special educational provision (*e.g.* Skolerådet, n.d.). While international evidence shows that Denmark has comparatively fewer weaker performers (see Chapter 2) and this would appear to reflect the *Folkeskole*'s emphasis on equity and inclusion in education, 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 students with a migrant background (see for example OECD, 2006;

Nusche *et al.*, 2010; Danish Ministry of Economics and Business Affairs, 2009). For example, the School Council judged that the aspect of teaching Danish as a second language was not adequately included as a dimension of the Common Objectives across different subjects (Skolerådet, 2008). The 'Flying Squad' (see Box 2.1) asserts that the *Folkeskole* lacks ability to cope with all children, especially those from socially disadvantaged family backgrounds. The national tests serve as one tool to check that students have gained the basic skills in key subjects, however – beyond the special test offered for Danish as a Second Language – they may not give an accurate diagnosis of bilingual students' cognitive ability. For example, although students have mastered mathematical concepts, they may have difficulty understanding some of the more linguistically complex mathematics problems in the national tests. Research shows that teachers can assess these students' content knowledge by simplifying the linguistic features of mathematics problems. Such careful modifications can also provide similar advantages to students with disabilities (Abedi, 2004; Abedi, Hofstetter and Lord, 2004).

Inconsistency in classroom assessment practice across schools and municipalities

The OECD review team shares the School Council's assessment that the evaluation culture has been significantly improved following the launch of key national initiatives in 2004 (Skolerådet, 2010). However, good student assessment practice is not spread evenly across schools and municipalities. The availability of in-house specialists and use of test materials varies from school to school – indeed a recent evaluation revealed that assessment specialists are only in 8% of schools (EVA, 2009a). The OECD review also brought to light – albeit it based on only a small sample of schools – that there was varied practice in use of free tools available on the *Evaluation portal*. Though ISPs and the obligation for municipalities to produce a quality report provide a means to formalise assessment practice, they have not yet reached the fullest potential. Though many schools – often as part of a municipal policy – choose to use commercially available diagnostic tools for reading and mathematics skills, teachers reported to the OECD review team that they need both a range of evaluation tools, including subject-specific assessment materials, guidelines, and – importantly – they also need professional training.

The OECD review team interviews with pre-service teacher educators revealed that the pre-service teacher education programmes presently offer little training in student assessment for teacher candidates. The 'Flying Squad' (see Box 2.1) also concurred on this matter stating that not all teacher education colleges promote a culture where teachers and students continuously evaluate themselves and each other and reflect on such evaluation (Danish School Agency, 2010).

This heightens the importance of effective municipal support to develop teacher assessment capacity. During the OECD review, some teachers reported their apprehension regarding assessment activities and their perception that these increased workloads. This indicates that assessment is not an integral aspect of their teaching. In fact, effective teachers integrate assessment into their teaching and do not see it as an additional burden on their teaching responsibilities (Stiggins, 1995).

Lack of engagement of students in their self-assessment and peer assessment

Student involvement in the assessment process is crucial for developing a sense of ownership in learning. The Assessment Reform Group (2002) in England emphasises the involvement of students in effective formative assessment, defining it as the 'process of seeking and interpreting evidence for use by learners and their teachers to decide where the learners are in their learning, where they need to go and how best to get there'. The OECD review team gained the impression that the involvement of students in their assessment is not wide-spread practice in the *Folkeskole*. In most schools the team visited, students and their teachers did not report that students participate in setting learning goals, reflecting on their progress, and evaluating their learning outcomes, indicating a rather passive role for students in assessment activities. Of course, there were also examples where teachers and students reported they were jointly involved in assessment activities. Teachers should solicit students' input when creating assessment rubrics and should provide students with opportunities to use these rubrics for self- and peer-evaluation purposes (Ross, Rolheiser and Hogaboam-Gray, 1999). The ISPs provide one mechanism to actively engage students in assessment of their progress at regular intervals in a more systematic way. However, the current requirement is for ISPs to be drawn up at least once a year – this is clearly not often enough to engage students in a serious ongoing self-evaluation.

Engaging teachers to effectively use the results of the national tests

The Ministry of Education clearly states that the intended purposes of the national tests are two-fold: to provide teachers with diagnostic information about students' strengths and areas of improvement and to monitor school performance. While during the OECD review, some teachers reported that they found the test results useful and consistent with their own assessment, others raised concerns about using the test results for accountability. The Danish Union of Teachers (DLF) reported to the OECD review team that it perceives that the tests were designed as a control mechanism and not as a diagnostic tool (see also Rambøll, 2011). DLF believes that the timing of test administration should be set by the teachers and that this would significantly increase their use of the national tests. (It is of note, that in future teachers will be able to schedule administration of the national tests anytime during the period 1st February to 30th April [Wandall, 2010]). Such concerns are not unexpected because a nationwide standardised test is unprecedented in the *Folkeskole*. Also, the initial implementation issues in administering the computer-based tests damaged their credibility among some educators[14].

The challenge is to continue open dialogue to establish evidence-based credibility for the national tests among teachers. The OECD review team met with teachers who were effectively working with the test results and saw these as a free source of extra diagnostic material to confirm their own professional judgement. However, the OECD review team gained the impression that due to their ideological opposition, many teachers do not currently use the national tests well which renders them of limited value. The OECD review team sees considerable value in rapid feedback to teachers that the national tests offer, however, it is pivotal, at this early stage of the system implementation, to build

14. Although the 2010 tests were largely successful, there was a two-week period when tests could not be conducted due to technical issues and not all students who should have sat the tests were able to (Wandall, 2010).

support among teachers and to promote the effective pedagogical use of test results. The testing system requires research evidence on the extent to which the interpretations and use of the test results are appropriate, meaningful, and useful (Messick, 1989). Denmark should avoid the pitfalls faced by other countries when introducing national tests. Tension between formative and summative assessments arises when teachers are responsible for both. In classroom-based formative assessment, teachers offer assistance and provide multiple opportunities for students to demonstrate their proficiency. This role is at odds with their role as a test administrator in external testing (Haertel, 1999). When teachers experience such tension along with changes in national assessment policies, they become confused, counter-productive and resistant to changing their practice despite substantial training (Black and Wiliam, 1998; Gipps *et al.*, 1997; Shepard *et al*., 1996).

The main concerns for teachers reported during the OECD review were associated with negative consequences resulting from potential future high stakes attached to the tests, including narrowing the curriculum by teaching to the tests and emphasising basic knowledge and skills that are measurable by multiple-choice test items. This indicates lack of clarity on the purpose of the national tests and the types of skills they assess. Such concerns stem from teachers' awareness of research evidence surrounding the misuse of high stakes national tests by educators in other systems. Madaus and Kellaghan (1993) in an analysis of differentiated teacher views on standardised assessments in the United Kingdom identifies the important influence that the use of test results for multiple purposes exerts on teachers' views. The use of standardised assessment results in England, Wales and Scotland, emphasised different purposes of assessment such as formative, diagnostic, summative, and evaluative.[15] In England and Wales, despite the design of the tests to provide diagnostic information for teachers and formative feedback to students, the publication of test results for schools caused teachers to perceive them as 'high stakes'. In Scotland, teachers viewed these as 'low stakes' as results were used by teachers to provide diagnostic and formative information to students and could be communicated to parents and the school board only. However, Moos *et al.* (2008) find that school leaders in countries with tighter accountability (*e.g.*, the UK, the USA, Canada, China and Australia) tend to accept standards-based testing as is, but consider that results from national tests alone are insufficient indicators of school effectiveness and that the goal of education is more than teaching basic skills.

Final examinations in compulsory education are criticised as 'outdated'

While the OECD review team noted that both teachers and students took the final examinations in Forms 9 and 10 seriously, there were some criticisms voiced on the actual content and nature of the examinations, plus on their limited coverage of subjects offered in the *Folkeskole* – this would mainly refer to the Practical/Music subjects, but also not every student sits an examination in all the subjects he/she follows in the humanities and sciences (see Table 4.1). The 'Flying Squad' (see Box 2.1) calls to 'modernise the *Folkeskole* leaving examinations and make them count for students'

15. Madaus and Kellaghan (1993) define: formative use as 'the positive achievements of a student may be recognized and discussed and the appropriate next steps may be planned'; diagnostic use as 'learning difficulties may be scrutinized and classified so that appropriate remedial help and guidance can be provided'; summative use as 'the recording of the overall achievement of a student in a systematic way'; and evaluative use as 'some aspects of the work of a school, a local education authority or other discrete part of the educational service can be assessed and/or reported upon'.

access to upper secondary education'. The current purpose of the final examinations is to provide some documentation for students on their achievements in compulsory education, but student results in these examinations – at least officially – in no way influences their access to/choice of upper secondary education (Rambøll, 2011).

4.3 Pointers for future policy development

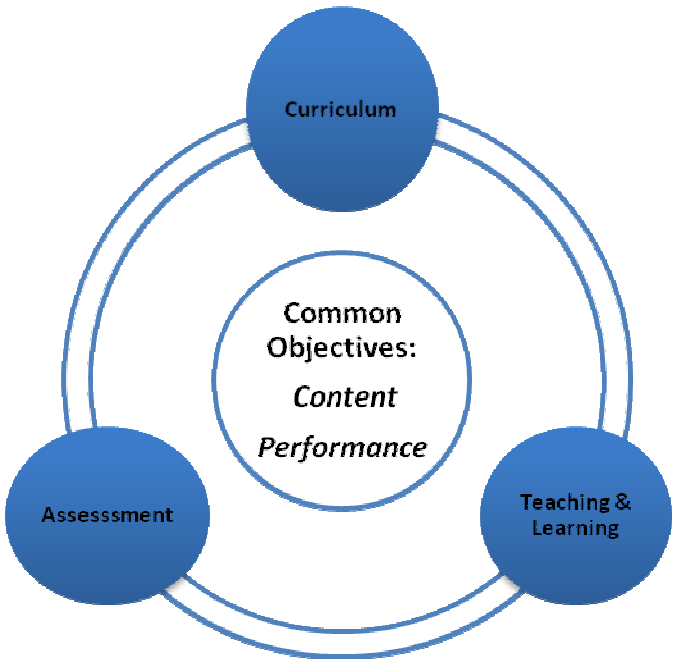
Denmark has a strong basis for formative assessment and has introduced several measures to strengthen the summative assessment of students over recent years. The preceding discussion of strengths and ongoing challenges within the Danish assessment system suggest a number of potential directions for policy makers to consider. In all cases, these strategies involve teachers and aim to develop their student assessment capacity. These include:

- Collaborate with educators to develop performance standards for the Common Objectives;
- Conduct research on effective assessment practices in the classroom;
- Develop teacher assessment literacy and competencies;
- Ensure students are actively engaged with and proficient in assessment;
- Maximise the pedagogical value of the national tests;
- Further validate and develop the national tests;
- Review the purpose, procedures and content of the final examinations in Forms 9 and 10.

Collaborate with educators to develop performance standards for the Common Objectives

The OECD review team commends the use of national Common Objectives in Danish compulsory education and the efforts made in 2009/10 to tighten and clarify the Common Objectives so that they can better guide curriculum development and assessment. However, various stakeholders stated that they are still not clear enough. The current Common Objectives articulate the knowledge and skills that 'teaching should lead towards', but not what students are expected to learn at key stages in each of the main subjects. The next step is to establish links among curriculum, teaching and learning, and assessment based on these Common Objectives. This is key to strengthening the Danish evaluation and assessment culture. A lack of alignment among objectives, curriculum, teaching and learning, and assessment compromises the quality of education and leaves educational goals unfulfilled. The Common Objectives are the anchor that links the three major pedagogical elements in the *Folkeskole* (see Figure 4.1).

Figure 4.1 Common Objectives guiding curriculum, teaching, learning and assessment



To establish the inter-dependent relationship among curriculum, teaching and learning, and assessment, the OECD review team recommends that the Quality and Supervision Agency goes further in documenting ways for teachers to assess students' learning progress against the Common Objectives by:

- Further refining and expanding the Common Objectives;
- Developing a set of specific performance standards against the Common Objectives;
- Providing relevant support materials for teachers to mobilise the performance standards.

In collaboration with teacher educators and special support teachers in each subject, the Quality and Supervision Agency should develop standards to describe a range of student proficiency levels with concrete learning evidence that students should demonstrate at each level. Common objectives with specific performance standards can guide instruction and assessment more effectively. For example, in the province of Ontario, Canada, content standards and performance standards comprise the assessment and evaluation of all student achievement in every subject in primary and secondary school (see Box. 4.2).

Box 4.2 Performance standards in the United States and Canada

In the United States and Canada, States and Provinces make use of performance standards to guide a more rigorous and transparent assessment of students. Regarding the United States, Perie (2008) compares the performance level descriptors used across different States and suggests best practice for developing these.[1] First, policy makers should determine the number of performance levels to use (typically no more than four levels) and carefully name these levels so as to reflect policy makers' values (*e.g.* does not meet standards/partially meets standards/meets standards/exceeds standards). Second, policy makers, possibly in collaboration with content experts, write generic policy definitions for each performance level that would apply and guide performance level descriptors for all subjects and all Grades. Third, once policy definitions have been set, content descriptions for different subjects and grade levels are developed. An example from Oregon (below) illustrates this: the policy definitions set the standard for performance in all subjects; a general achievement level definition is provided for each subject (reading in this example); then for each subject, a series of specific achievement level descriptors are provided for each Grade on defined knowledge and skills categories (*e.g.* for Grade 8 in reading: Read to perform a task (see below); Vocabulary; Demonstrate general understanding; Develop an interpretation; Examine content and structure/Informational text; and Examine content and structure/Literary text).

Extract from Grade 8 reading performance standards in Oregon, the United States				
Standards	Does not yet meet	Nearly meets	Meets	Exceeds
Policy definitions	Students do not demonstrate mastery of grade-level knowledge and skills required for proficiency.	Students demonstrate partial mastery of grade-level knowledge and skills required for proficiency.	Students demonstrate mastery of the grade-level knowledge and skills required for proficiency.	Students demonstrate mastery of grade-level knowledge and skills exceeding the requirement for proficiency.
Reading achievement level definitions	Students do not demonstrate mastery of grade level reading/ Literature knowledge and skills. They have a limited comprehension of grade level text and cannot make meaningful interpretations or an analysis of text.	Students demonstrate a partial mastery of reading/Literature knowledge and skills by comprehending the literal meaning of grade level text. They are able to make obvious interpretations but sometimes lack analysis skills.	Students demonstrate mastery of reading/ Literature knowledge and skills by accurately comprehending grade level text. They have the skills to interpret and analyze text.	Students demonstrate a strong mastery of reading/Literature knowledge and skills by thoroughly comprehending complex and challenging text. They are able to make thoughtful interpretations and evaluations.
Grade 8 Reading – descriptor for 'Read to perform a task'	Misuse or ignore aspects of practical text (headings, bold print, numbering) to decipher text when reading to perform a task.	Find information isolated in one area in practical text, but are often unable to synthesize information across diagrams, charts, and tables to reach logical conclusions when reading to perform a task.	Analyze information found in a variety of formats to reach conclusions supported by textual evidence when reading to perform a task including making connections between text and graphics in charts, diagrams and tables.	Synthesize information found in a variety of formats including reaching supported conclusions when reading to perform a task. Including making connections between multiple texts and graphics.

Box 4.2 Performance standards in the United States and Canada (continued)

The introduction of performance standards can also promote a set of highly valued skills/competencies that teachers should help students to develop in all subjects. For example, in Ontario, Canada, teachers are required to use an 'achievement chart' comprising four common categories used in all subject areas and disciplines: knowledge and understanding; thinking; communication; and application. These four categories are interrelated, reflect 'the wholeness and interconnectedness of learning' and help teachers to focus on students' development of thinking, communication and application skills, in addition to their acquisition of knowledge (Ontario, Ministry of Education, 2010). Thus, teachers are required to plan instruction, learning, assessment and evaluation carefully so as to address students' acquisition of content knowledge in balance with their development of skills to think, communicate and apply their acquired knowledge, in an appropriate way over the course of the year/term.

Finally, some systems offer examples of student work collected when compiling and developing the standards, to help teachers apply these in their classrooms. In British Columbia, Canada, specific performance descriptors are provided for different subjects at each grade level (against the four standard performance levels) and include helpful examples of either student responses at each performance level or teacher observations of student performance and their eventual performance level rating (see: *www.bced.gov.bc.ca/perf_stands/*). Illinois, the United States provides samples of classroom assessments in each subject demonstrating the performance standards (see: *www2.isbe.state.il.us/ils/html/descriptors.htm*).

1. Note that such performance standards generally describe student performance as measured in standardised assessments, following the requirement of the federal policy (the No Child Left Behind Act, 2001) that any assessment developed under the act must include at least three performance levels.

Source: Perie (2008); Ontario, Ministry of Education (2010); *www.ode.state.or.us/*.

Refined Common Objectives and common performance standards can guide student assessment more effectively. Such explicit definitions of the critical skills and knowledge at each stage of student learning enables teachers to select, develop and use the most effective assessments to determine where the teaching and learning process needs to be adjusted and how to do this to ensure student progress (Popham, 2008). First, teachers will benefit from a more obvious translation of the Common Objectives to curriculum. Second, teachers can explain to students how good is good enough, using the performance indicators included in the Common Objectives. Performance indicators can help students understand how their essays, laboratory demonstrations, or role-plays will be evaluated. Based on the common performance standards, teachers can develop general rubrics for each subject in teacher teams drawing from materials provided on the *Evaluation portal*, including assessment materials, sample rubrics and examples of student work at each performance level.

Further, teachers can engage students in constructing specific rubrics and use these to facilitate peer assessment, self-assessment as well as teacher feedback. The co-construction of rubrics promotes both student learning and reflective teaching practice (Andrade, 2005; Jonsson and Svingby, 2007). As students internalise the criteria for evaluating their work, they are better able to connect their performance with their preparation, and develop an internally oriented sense of self-efficacy (Stiggins, 2005). Teachers can use classroom assessment as the vehicle for helping students develop, practice, and become comfortable with reflection and with critical analysis of their own learning (Earl and Katz, 2008). These evaluation criteria and quality definitions should be aligned with the Common Objectives and common performance standards. In this way, the Common Objectives can positively influence consistency and equity of teachers' assessment practice across schools and municipalities.

Conduct research on effective assessment practices in the classroom

More research is necessary to understand what works for Danish students in the classroom. Student assessment should be informed and guided by various perspectives of learning. Different perspectives hold different views of learning, accordingly resulting in different methods of assessment (Greeno, Collins and Resnick, 1996; Pellegrino, Chudowsky and Glaser, 2001). Cognitive perspectives view learning as a process that involves individual students in structuring knowledge and skills and transferring them to new situations through socially mediated interactions. On the other hand, situative perspectives attribute a learning process to ways in which individuals interact with and participate in communities, and develop their identities (Lave and Wenger, 1991). Evaluation should be guided by such theories of learning and should assess students' growth in problem solving, reasoning, communication, and social participation (Anderson *et al*., 2000). The Danish student assessment framework should be based on a sound theoretical foundation of learning. It should guide teachers in deciding what to assess, how to assess and how to use information. Assessment policies without research evidence can result in well-intended but ill-informed instructional practice. This recommendation resonates well with the 'Flying Squad's call for more rigorous research in building a knowledge base for the *Folkeskole* (Danish School Agency, 2010; see Box 2.1).

In 2007, the Norwegian Ministry of Education and the Norwegian Directorate for Education and Training launched the 'Better Assessment Project' to shed more light on effective formative assessment (Norwegian Directorate for Education and Training, 2011). This large-scale research project explored whether criteria developed in different ways for different subjects could give a more subject-related and fairer assessment of students' competencies. The Norwegian Directorate provided guidance and support to the 77 participating schools (primary, lower and upper secondary). Teachers in primary and lower secondary schools are testing out the use of assessment criteria in the subjects Norwegian, mathematics, social science and home economics in Forms 2, 4, 7 and 10. Results from the research will feed directly into policy and competence building.

Develop teacher assessment literacy and competencies

Instructional decisions should be driven by assessment data that are systematically accumulated, analyzed and evaluated in both short and long terms (Hamilton *et al.*, 2009). Over recent years, there have been attempts to launch the *Folkeskole* on the road to becoming a data rich environment. There is now student data available to teachers in the *Folkeskole* from the national tests, the school leaving examinations, individual student plans, and standardised diagnostic tests. Strong assessment competencies and the ability to effectively interpret data are central not only in making the right diagnosis, but also in making the right decisions (Barber, 2009; Heritage *et al.*, 2009). Teachers' professional development in student assessment is of the utmost importance in Denmark. If new teachers enter the teaching profession without basic knowledge and skills about how to assess student learning, it is likely to prolong the pathway to excellence in the *Folkeskole* education. Building teachers' assessment literacy takes time and it is crucial that this is adequately covered in initial teacher education. Faced with a similar need to enhance the inclusion of student assessment in initial teacher education, the Norwegian Directorate of Education funds a 'Network For Assessment'. The network links various teacher education institutions and aims to develop expertise within each institution to improve the competence of teacher educators in assessment.

Teachers who are assessment literate and competent can distinguish high-quality assessment from poor and can apply that ability to improve their own assessment practice (Stiggins 1991, 1995). In the United States, teachers' assessment competence is characterised in terms of seven principles in the standards for teacher competence in educational assessment of students (American Federation of Teachers, the National Education Association and the National Council on Measurement in Education, 1990):

1. Teachers should be skilled in choosing assessment methods appropriate for instructional decisions.
2. Teachers should be skilled in developing assessment methods appropriate for instructional decisions.
3. The teacher should be skilled in administering, scoring and interpreting the results of both externally-produced and teacher-produced assessment methods.
4. Teachers should be skilled in using assessment results when making decisions about individual students, planning teaching, developing curriculum, and school improvement.
5. Teachers should be skilled in developing valid student grading procedures which use student assessments.
6. Teachers should be skilled in communicating assessment results to students, parents, other lay audiences, and other educators.
7. Teachers should be skilled in recognising unethical, illegal, and otherwise inappropriate assessment methods and uses of assessment information.

There needs to be a paradigm shift so that teachers view assessment as an integral part of their teaching and not as an additional burden on their teaching responsibilities. Professional development will play a pivotal role here. On-going professional development should not be considered optional but essential for teachers' professional growth. Today's students are immersed in an ever expanding digital and multi-modal learning environment. Accordingly, teachers need to continually adjust and renew their assessment practice to accurately assess new ways of learning. The OECD review team commends the practice of some municipalities in providing in-service specialist training for special teams of teachers so that they can lead and support other teachers' assessment activities. If offering external in-service teacher training is costly and time-consuming, assessment specialists should play a more active role on teacher training within schools. Teachers' professional growth in assessment can begin with reflective questions such as:

- Should this assessment be part of normal classroom activities?
- Does it clearly match the targeted learning goal?
- What level of knowledge and skills are being assessed? Does it assess basic knowledge or creative and deep thinking?
- Are there clear criteria against which performance is judged?
- Does it provide equal opportunities for students to demonstrate what they can do?
- What feedback will be most useful for students and how should it be provided, orally or in writing?

Differentiated instruction is key to academic success for all students. Principled assessment that evaluates students' progress toward high yet attainable targets is pivotal for differentiated instruction. High-quality assessment can provide diagnostic data for developing differentiated instructional plans, providing accommodations for students requiring additional support, and evaluating the effectiveness of teaching (Jordan, Lindsay and Stanovich, 1997; Pellegrino, Chudowski and Glaser, 2001).

In New Zealand, the Ministry of Education has implemented a specific strategy to promote the ongoing professional development of teachers and specifically to build their assessment capacity. One part of this two-fold strategy (Gilmore, 2008) involves national professional development programmes and evaluations of the major programmes offered have shown positive impact on student learning (see Box 4.3 for examples). The second part of the strategy involves continuous professional development at school. This can be through teachers' involvement in school activities where assessment plays an important role, and increasingly via student feedback as they develop their own assessment capacity (Timperley *et al.*, 2007; Absolum, *et al.*, 2009). The third major way to build teachers' assessment capacity is by engaging them in the moderation of the national sample monitoring tests.

Box 4.3 Professional development related to student assessment

Assess to Learn (AtoL) is a whole-school professional development programme that has been offered to primary and secondary schools since 2002. Schools can apply for participation in the programme and typically participate for two years. The annual budget for AtoL is $3.17 million and currently involves 155 schools. The programme intends to support teachers in choosing adequate assessment tools and analysing assessment information so as to further advance student learning. A 2008 evaluation of the AtoL programme reported a significant impact of the programme on teacher professional practice and important improvements in student learning, especially for students with initially low achievement level. Monitoring data showed that schools participating in AtoL had achieved up to 4.5 times greater improvements in writing achievements in Years 4 to 9 than the nationally expected rate of progress.

The Literacy Professional Development Project (LPDP) was a six-year programme involving 323 schools and over 3 000 teachers. The programme provided whole-staff school-based literacy professional development running for over two years. It focused on improving student literacy achievement through an evidence-based inquiry model focused on quality teaching and development of professional learning communities. This was not a programme particularly focused on assessment, but collecting and interpreting data was a key component of it. The evaluation showed that schools participating in LPDP had significantly improved student progress and achievement in reading and writing, and especially so for the students most at risk of underachieving.

Source: McDowall *et al.* (2007); Poskitt and Taylor (2008); Gilmore (2008); New Zealand Ministry of Education (forthcoming).

Ensure students are actively engaged and proficient in assessment

Students are at the heart of student assessment and should be actively involved in assessment. Today's classrooms are experimenting with collaborative real-life tasks to better prepare students for the future. As a result, students are observed working on complex problems in groups. To engage students in self- and peer-assessment processes in such co-operative learning and assessment contexts, students should first learn to develop both leadership and responsibility for learning. Hargreaves and Fullan (1998) suggest that classrooms and schools can turn into democratic practices through active involvement of students and parents in assessment and decision-making processes. As noted above, assessment schemes, including the specification of what will be assessed and how it will be appraised, must be made transparent to students (Ross, Rolheiser and Hogaboam-Gray, 1999).

In Sweden, students are involved in goal setting and self-assessment which forms a core part of their formative assessment – in addition to regular development talks between teachers, students and parents and the use of individual development plans (IDP). Teachers in Sweden use the individual development plans to engage students in setting goals for learning and encourage students to develop skills for self- and peer-assessment. Teachers are generally more likely to focus on formative assessment when they have tools and guidelines to support the process (OECD, 2005a). Similar to in Sweden, teachers in Denmark could use the ISPs to focus both teachers and students on identifying individual learning goals and developing strategies to address any shortcomings, *i.e.* focusing on the future development of the students' learning. Used effectively, ISPs could be a powerful tool for developing students' own assessment skills.

In Finland, 'learning-to-learn' skills are considered to be central to each student's development (Finnish Department for Education and Science Policy, forthcoming). These are actively promoted as core elements in achieving lifelong learning and include a student's capacity for independent and self-motivated learning, problem-solving and the ability to evaluate his/her own learning and related strategies. There is a clear pedagogical goal in all compulsory education subjects for students to develop 'learning-to-learn' skills. To evaluate and promote the importance of such skills, national sample assessments were developed by the Centre of Educational Assessment at the University of Helsinki to evaluate 'learning-to-learn' skills in Years 3, 6 and 9 of compulsory education.

Maximise the pedagogical value of the national tests

The political discourse on publication of national test results seems to have overshadowed the significant pedagogical value that the national tests can bring. It is critically important to engage teachers in working effectively with the national test results as one means to diagnose student learning needs and to adjust their teaching strategies accordingly. The national tests offer teachers access to a sophisticated analytical tool to plan instruction both for individual students, for the class and for particular groups of students following a particular programme. Teachers as professionals are responsible for ensuring the clear communication of the nature of the national tests. Some students and teachers expressed confusion during the OECD review regarding the adaptive feature of the national tests, for example, some of the more proficient students felt that they performed poorly on the test because they found the test difficult. Such concerns are linked to the implementation issues and should no longer be an obstacle as teachers and students become familiar with the format of the national tests. While the former School

Agency has provided clear information on the national test features – specifically its adaptive function – and has offered conferences and other outreach activities on the nature of the tests, the Quality and Supervision Agency must continue to be proactive and work together with the Teacher Union, KL and Municipalities to ensure that teachers understand and communicate to students that in adaptive testing, students' perceived item difficulty does not necessarily reflect poor test performance. Students' test-taking experience should not affect their self-esteem in any way. Municipalities need to ensure that teachers explain both the purpose of the national tests and how the tests work clearly to students and parents. Indeed, evidence from the OECD's trial of a computer-based science test in Denmark, Korea and Iceland, revealed high motivation for the computer medium in Denmark: 87% of girls and 85% of boys agreed or strongly agreed that the computer-based test was enjoyable; in contrast 44% of girls and 36% of boys agreed or strongly agreed that the paper-and-pencil test was enjoyable (OECD, 2010f).

The national tests offer teachers the possibility to re-administer the tests (outside of the mandatory testing period) up to twice more with their students. This offers a powerful opportunity to teachers to track student learning progress on the discrete areas assessed. Effective teachers adopt a systematic and cyclical approach to using assessment data (Hamilton *et al.*, 2009). High-quality external tests (*e.g.*, national and standardised assessments) have the potential to provide useful data for teachers to guide and improve teaching and learning (Chudowsky and Pellegrino, 2003). Often teachers find it difficult to interpret and use student data on external tests because the data do not always provide timely diagnostic information and lack strong curricular links (Militello, Schweid and Sireci, 2010). In the case of the Danish national tests, teachers are provided with rapid diagnostic feedback and these are in selected profile areas within the national Common Objectives.

Without the active engagement of the Teacher Union and teachers in using results from the national tests, Denmark can face the dilemma found in other systems that the learning environment can be 'both data rich and information poor' (Wayman and Stringfield, 2006). Educators need to be actively involved in developing data-driven professional learning communities where assessment data are used in non-threatening ways and teachers develop assessment competencies.

Further validate and develop the national tests

Any new and existing tests require comprehensive validity evidence. The OECD review team commends the former School Agency's efforts for the development and initial validation of the national tests through large-scale field trials (Wandall, 2010). The national tests include an item bank of 7 200 items – 10% of which will be renewed each year. Each test item was trialled on 500-700 students for functionality, the test items were carefully developed and reviewed by content experts to ensure construct validity and psychometric scales were successfully established through 1PL Rasch modelling (Wandall, 2010).

Validation is a long-term process of accumulating, interpreting, refining, and communicating multiple sources of evidence about appropriate interpretations and use of test information. The OECD review team strongly encourages the Ministry of Education and the Quality and Supervision Agency to continue to refine and validate the testing system with short- and long-term strategic plans. We are confident that the national tests will gain credibility over time among teachers. With sufficient validity evidence from on-going research, teachers and administrators will grow comfortable with the system, and the system will fulfil the intended purposes of both accountability and pedagogy.

In the process of validation, attention should be paid to the following issues:

- The breadth of curriculum should be maintained in student assessment by ensuring that all objectives and subject areas are given certain forms of attention. Other diagnostic tools and activities should complement the national tests to measure students' learning progress and outcomes in all subjects and objectives. When the Danish national tests serve the high-stakes accountability purpose by publishing the results to the public, instructional time is more likely to be devoted to what will be measured. To prevent teachers from teaching to the tests and thereby narrowing the curriculum, multiple measures of student achievement should be used to determine the quality of school performance and student outcomes.
- The degree to which the national tests authentically reflect what is taught and learned in classrooms may have significant impact on the pedagogical usefulness of the test results. Considering a lack of curricular standards in the *Folkeskole*, the national tests should be monitored and validated through on-going research on issues related to the alignment between Common Objectives prioritised by the tests, local curriculum, and the test content. The assertion by the Association of Danish Students that the tests do not reflect 'the complicity or concrete themes of the teaching in the class' (Rambøll, 2011) is worrying. Although the tests are only in discrete areas of the Common Objectives, it would be important to establish whether such reported phenomena are due to sequencing of class instruction, inadequate implementation of the Common Objectives by schools or inadequate alignment of the tests with the Common Objectives.
- The item bank of the national tests needs to be expanded by including performance tasks in addition to the multiple-choice test format. We are impressed that the national test system has developed a large bank of items which were psychometrically calibrated and validated through field testing and expert panel review. While the multiple-choice test items allow for timely and efficient scoring by the central system, relying solely on multiple-choice test items risks losing the potential of deep learning that involves critical reasoning and problem solving skills beyond factual knowledge, which is crucial for certain core subject areas, such as science and mathematics, in preparing Danish students to be competent citizens nationally and internationally. As noted earlier, performance tasks are more common than multiple-choice tests in student assessment in Denmark. Therefore, including performance test items in the national tests may enhance the authenticity of the national test scores by better reflecting ways in which Danish students learn in their classrooms. Engaging teachers in the scoring and moderation of performance tasks is also an effective way to build assessment capacity throughout the system (see below). Alternatively, some performance test items could be developed and added to the item bank in the computer adaptive tests. From a psychometric point of view, although computer adaptive tests typically use multiple-choice test items that are scored as either correct or incorrect (*i.e.*, binary), they increasingly include performance test items, such as short answer test items, oral speeches, short and long essays (a.k.a. constructed response items) that are scored in multiple categories (*i.e.*, polytomous). Currently, much research is underway to understand the validity and reliability of automated computer scoring of performance tasks. Therefore, it is possible (technologically) and valuable (pedagogically) to consider constructed response

test items (*i.e.*, short and long essays) in expanding the item bank of the national tests.[16]

Review the purpose, procedures and content of the final examinations in Forms 9 and 10

The OECD review team recommends a review of the purpose, procedures and content of the current suite of final examinations in Forms 9 and 10. The 'Flying Squad' recommends that the purpose of the final examinations should change to make them count for students' access to upper secondary education (see Box 2.1). If the final examinations are to carry higher stakes for students, then:

- It would be imperative to ensure the comparability of assessment practices among teachers, schools and municipalities and current moderation procedures for oral examinations should be reviewed and if necessary strengthened;
- Consideration should be given to changing current procedures whereby students only sit examinations in a few core subjects and are randomly selected for examinations in the humanities and sciences blocks, to ensure that students are able to sit examinations in all subjects that are relevant to their future educational/career pathways. This would mean developing final examinations in other subjects, *e.g.* in technology, to reflect the full suite of subjects offered in the final Form levels of the *Folkeskole*.

In light of the criticism voiced by students and other stakeholders, the OECD review team recommends a serious review of the content of the final examinations to ensure they are adequately aligned with the Common Objectives and accurately reflect the types of knowledge and skills that 'teaching should lead towards' by the end of compulsory education. These send a strong signal to teachers and students on the expected outcomes of compulsory education and heavily influence instructional and assessment plans, in particular in Forms 7 to 9. Such a review should build on the suggested exercise to clarify the Common Objectives and to develop a set of performance standards against these.

16. An example of a computer-based test including performance type items is the Educational Testing Service's Electronic Essay Rater (e-rater). This uses natural language processing technologies to score students' essays, and it is now operational and used to score the essay component of the General Management Aptitude Test (GMAT).

Chapter 5

Teacher Appraisal

Teachers are given considerable scope to exercise their professionalism and benefit from good levels of trust among students, parents, and the community. Schools increasingly structure their work around teaching teams and engage special support advisors. However, teacher appraisal is not systematic and there is no shared understanding of what counts as accomplished teaching in Denmark. It is a top priority to develop a framework of teaching standards to provide the common basis to organise a career structure for teachers. Teacher appraisal for certification would determine both teachers' career advancement and professional development plans. Danish teachers are generally keen to receive feedback for their professional development, but while some school principals hold a formal dialogue with teachers on an annual basis, it is not wide-spread practice for school principals to observe teaching. Developmental teacher appraisal should be strengthened and linked with teacher professional development and school improvement.

This chapter looks at approaches to teacher appraisal within the Danish evaluation and assessment framework. Teacher appraisal refers to the evaluation of individual teachers to make a judgement about their performance. Teacher appraisal has typically two major purposes. First, it seeks to improve teachers' own practices by identifying strengths and weaknesses for further professional development – *the improvement function*. Second, it is aimed at ensuring that teachers perform at their best to enhance student learning – *the accountability function* (Santiago and Benavides, 2009). An overview of the main features of the teaching profession in Denmark is provided in Box 5.1.

5.1 Context and features

Teacher appraisal procedures

Teacher appraisal is not regulated by law and no national requirements exist to evaluate the performance of teachers. Actual teacher appraisal practices are determined locally (*i.e.* at the school level) with the possible influence of municipal requirements/guidelines. According to the *Folkeskole* Act, the school principal is responsible for the quality of teaching at the school as well as the overall administrative and pedagogical management of the school, including the professional development of teachers. As a result, the main responsibility for designing, introducing and organising teacher appraisal procedures within the school lies with the school principal. Actual teacher appraisal practices in Danish schools are poorly documented but they seemed to be based on a culture where school leaders show confidence in their teachers, appraisal is taken as a school-teacher or teacher-teacher dialogue, and procedures are defined in collaboration with the teachers.

Many municipalities require that all school employees engage in a typically annual professional dialogue with their leader/manager. This employee dialogue often results in a professional development plan for the employee and is usually organised in a formal report/follow-up model. The basis for the discussion and the set of criteria used are defined at the school level possibly following a framework defined at the municipal level and so can vary considerably. At the present time, the implementation of employee dialogues differs considerably across those municipalities and schools which use them, depending on local capacities and the evaluation ethos of schools. It is not guaranteed that every school principal assesses each teacher annually.

Occasionally, teacher appraisal external to the school can also be conducted as when municipal consultants, the Danish Evaluation Institute or a third party carry out teacher appraisals to ensure the quality of the schools and their work.

There is little guidance provided at the central level on how to evaluate teacher performance. No performance criteria and reference standards exist at the national level. The idea is that each school defines its own evaluation criteria linked to local objectives, possibly following the municipal requirements or guidelines. Nonetheless, the *Evaluation portal* provides tools for teacher appraisal (see below). This reflects a national approach based on encouraging voluntary teacher appraisal through the provision of information and tools for its application in a school context rather than making it a requirement in a uniform structure.

There is no systematic information on teacher appraisal in independent schools. Each independent school or each group of independent schools (if within the same school organiser) develops its own system of teacher appraisal with no external monitoring and so the diversity of approaches is considerable. However, results from the TALIS study indicate that the external appraisal of teachers takes place more frequently in private independent schools and independent boarding schools for lower secondary students than in the public schools (Skolestyrelsen, 2009). This is likely to be related to the fact that it is the parents' responsibility to supervise the private independent schools' regular activities. In this context, parents must select a person with professional and pedagogical qualifications to supervise the teaching in the school.

Teacher accountability through market mechanisms

It is important to stress that there are features in the Danish education system that lead to strong competitive forces on schools and teachers to perform well in order to: justify municipal spending on schools; attract students; and attract/retain effective teachers. These relate to school funding and reflect the decentralised nature of the Danish education system and the extent of school choice (*e.g.* with private independent schools receiving a public subsidy per student equivalent to 75% of that provided to public schools). First, "funding follows the student" as when a student moves school, the operating grant that applies to that student is reallocated to their new school (regardless of it being a municipal or a private independent school). Second, the municipalities are able to choose the amount of funding that they allocate to schools provided that they comply with their legislative obligations and meet the national objectives. Third, most funds are allocated to schools in a block grant, and school principals are able to determine the division of funds between different categories of expenditure, including different types of teachers and non-teaching staff.

Other forms of feedback for teachers

Teaching quality is rarely addressed in the context of school evaluation. The mandatory municipal quality reports typically do not address the quality of teaching practices. The list of indicators prescribed centrally for municipal quality reports does not include indicators on the quality of the teaching. Hence, current school evaluation practices do not encourage feedback on teacher performance. By contrast, given the emphasis on school self-evaluation, it is expected that schools put in place development processes as part of systematic work on quality improvement, including the quality of the teaching and learning. However, little information is available on the importance of teaching quality in school self-evaluation practices.

Competencies to assess and to use feedback

The key role in teacher appraisal is exercised by school principals. These are typically former experienced teachers who are appointed by municipalities through open competitions which also involve school boards. Requirements to become a school principal, such as the type of professional experience, are determined by the municipality (or the organisers of independent schools). They do not necessarily undergo specific training for school leadership before taking up their post. There are indications of some shortcomings in principals' skills for evaluation and quality assurance activities. A study commissioned by Local Government Denmark, the Ministry of Finance and the Ministry

of Education, concluded that 70% of school leaders expressed the need for increased competence development in evaluation, strategic development and quality assurance and development (Skolerådet, 2009). This is in a context where there is the perception that the evaluation capacity within schools still needs to be further developed.

A significant initiative to promote the evaluation culture in the Danish School System and encourage the acquisition of skills for teacher appraisal is the development of the *Evaluation portal*. The portal makes available a set of tools including some targeted at teacher appraisal such as the setting of objectives, teacher logs, teaching observation tools, and the use of surveys (see further information in Rambøll, 2011).

Using appraisal results

Teacher appraisal in Denmark is essentially used with formative purposes. In most instances, especially when it is conducted in the context of the employee dialogue, it is expected to inform the professional development activities of the teacher, ideally in close linkage to the needs of the school and the local community. No consequences for teacher career advancement and salary are contemplated. If an underperforming teacher is identified, the school principal is supposed to take responsibility for finding a solution.

Box 5.1 The teaching profession in Denmark – Main features

Employment status

Teachers working in the public sector are salaried employees of municipalities. Conditions of service are governed by two-year agreements between Local Government Denmark, the Ministry of Finance and the Confederation of Teacher Unions. These stipulate basic salaries and general working conditions. More specific salary supplements and working conditions are determined at the local level. Teachers working in the private independent sector are salaried employees of independent schools' organisers.

Most teachers are employed on indefinite term contracts, which means that they can only be dismissed on grounds covered by legislation such as redundancy, disciplinary reasons or underperformance. According to TALIS,[17] 96.6% of Danish teachers of lower secondary education are permanently employed (2nd highest figure among TALIS countries, against an average of 84.5%). No probationary period for newly qualified teachers exists in the *Folkeskole*. Where there are not enough qualified applicants local authorities can employ other persons on a fixed-term contract.

17. OECD's Teaching and Learning International Survey, which was implemented in 2007-08, covering lower secondary education and with the participation of 23 countries (OECD, 2009d). The results derived from TALIS are based on self-reports from teachers and principals and therefore represent their opinions, perceptions, beliefs and their accounts of their activities. Further information is available at *www.oecd.org/edu/talis*. TALIS results for Denmark are provided in Annex 3.

Box 5.1 The teaching profession in Denmark – Main features (continued)

Prerequisites to become a teacher and teacher recruitment

To obtain employment as a teacher in Denmark, in accordance with the *Folkeskole* Act, individuals should have a recognised qualification, which is usually an approved teacher education degree, or an equivalent foreign qualification. Other requirements include good command of the Danish language and satisfactory results in a criminal history check. Teacher recruitment and appointments are typically the responsibility of school leaders and are undertaken in the context of open competitions.

Salary and career structure

In Denmark career progression and salary are almost entirely dependent on length of service and qualifications. There is a single salary scale (basic salary system), incremental on the basis of tenure, and the top is reached after 8 years. Teachers may earn more within their pay scale in specific instances. There is a centrally-agreed function supplement for teaching over and above 300 annual hours (there is a function wage for work and responsibility areas linked to the individual position above those covered by the basic salary). Teachers may also receive a 'qualification' wage associated with objective conditions such as education and experience, which is agreed at local level. Plus, teachers may be eligible to receive an area supplement depending on the location of the *Folkeskole* where they teach. Finally, teachers can access a 'seniority salary system' once they have reached the top of the 'basic salary system'. Opportunities for promotion are limited to access to school management roles within schools.

Initial teacher education

Initial teacher education consists of a professional 4-year bachelor programme provided at 8 university colleges in Denmark. The programme provides a general qualification for teaching in primary and lower secondary schools. The programme involves the following major components: subjects on education such as educational theory, psychology and educational sciences; Christian studies and citizenship; 2 or 3 main subjects (*e.g.* Danish, mathematics); a Bachelor of Education project; and teaching practice (in all main subjects and in all 4 years).

Professional development

Professional development for Danish teachers is not regulated by law and there is no minimum requirement. Participation in professional development activities has no direct effect on pay levels or the career of the teacher (*e.g.* promotion is not conditional upon having taken part in professional development activities). However, professional development takes place at the initiative of teachers and schools. According to TALIS, in 2007-08, 75.6% of Danish teachers of lower secondary education undertook some professional development in the previous 18 months (against an average of 88.5 among TALIS countries). Professional development for teachers in the *Folkeskole* is primarily organised by the Danish University of Education, university colleges and municipalities. Specialised State training institutions, teachers' associations and the Ministry of Education also offer in-service training activities. Regional committees for teacher in-service training have been established to align municipal and school training needs with the supply of programmes by professional development providers.

5.2 Strengths and challenges

Strengths

Teachers are trusted professionals with a high degree of autonomy

The OECD review team formed the view that Danish teachers are generally perceived as trusted professionals among the different stakeholders which also results from their extensive autonomy in the exercise of their duties. Teachers decide on the teaching content within the framework provided by the Common Objectives and the possible refinement of these developed by the municipality in which they teach (although in reality the majority adopt the Common Objectives). They choose teaching materials and methods of instruction to achieve learning objectives. They also have fairly good levels of autonomy in student assessment, including in the oral and project components of school-leaving examinations. Teachers have room to develop practices that fit local needs. Most importantly, they function as learning facilitators for their students as these are taking more responsibility for their learning, student learning becomes more individualised and communication with students' parents is strengthened. Overall, teachers are given considerable scope to exercise their professionalism and benefit from good levels of trust among students, parents, and the communities in general.

Teamwork provides opportunities for peer learning

Work in Danish schools is increasingly organised in a way that grants opportunities for teamwork. Schools more and more are structuring work around teams of teachers (*e.g.* Class team, Form team, Section team, Subject team) which share responsibility for organising their work. This recent development has led to growing co-operation among teachers and a more formal dialogue between the school leaders and teams of teachers. This also provides a context in which some schools organise teacher appraisal mostly within teams. In this situation teachers are to co-operate on promoting the quality of the teaching in the school. It is a widespread practice in the *Folkeskole* that planning, learning and knowledge sharing takes place in teacher teams in school. Other typical activities among teachers include supervising each other within a team and discussing the progress and development of a single student together. Denmark is among the countries in which, in lower secondary education, the feedback from other teachers or members of the school management team can be more frequent. According to TALIS, and for the following frequency, the proportion of teachers who reported having received such type of feedback on their work is: 27.4% three or more times per year (3rd highest figure, against a TALIS average of 19.3%); 12.5% monthly (8th highest figure, TALIS average of 10.4%); and 11.7% more than once a month (5th highest figure, TALIS average of 9.1%).

Teachers are keen to receive professional feedback

Danish teachers are generally eager and willing to receive feedback. During the OECD review, teachers conveyed their appreciation for the time the school principal took to provide them with feedback and in general, where classroom visits were conducted either by the school principal or their peers, found these useful. The *Employee dialogue* was mostly perceived as an opportunity for developmental feedback. In most cases, the regret was that the extent of professional feedback was limited and they were eager to

have more opportunities to discuss their practice. There were also cases of teachers actively seeking the feedback from their students on their teaching practices and the learning in their classroom through surveys.

Evaluation advisors have the potential to foster professional feedback in schools

An interesting development in the effort to strengthen the evaluation culture in Danish schools is the introduction of the role of evaluation advisor among the so-called 'resource persons' that Danish schools can hire. Resource persons are teachers who undertake specific training and acquire expertise in a given domain who then perform the function of expert in that domain as part of their duties as a teacher (*e.g.* IT tutors, reading tutors, librarians). Evaluation advisors are still a limited resource in Danish schools: in a study from the Danish Evaluation Institute, only 8% of schools examined in the study had an evaluation advisor (EVA, 2009a). There is little information about their specific roles and tasks. These broadly consist of supporting the school effort in developing evaluation practices and an evaluation culture. It might involve the guidance and coaching of colleagues and school management on self-appraisal of teaching practices, peer feedback (including classroom observation), new knowledge and/or initiatives in the educational field, implementation of educational policies, co-ordination of quality assurance within the school or simple individual advice to teachers. The study by the Danish Evaluation Institute concludes that it is easier for resource persons to be more effective in schools which have a tradition of peer feedback, team work and a culture of open classroom doors (EVA, 2009a).

Making self-appraisal tools available to teachers promotes a culture of professional self-inquiry

Following the principle of encouraging teachers to reflect on their own practice while respecting their professional autonomy, tools for teacher appraisal are available to teachers on the national *Evaluation portal*. The portal seeks to contribute to the development of evaluation capacity and competencies of municipalities, teachers, school leaders and parents. The portal was developed as part of the project *"Strengthening the evaluation culture in the Folkeskole"*. It provides a large number of articles on evaluation in general, evaluation tools and tools for the individual subjects in the *Folkeskole*. It should be noted that several municipalities, as well as Local Government Denmark, also produce materials and tools for evaluation in schools. These initiatives offer much potential to foster a culture of professional self-inquiry in schools.

Challenges

There is no shared understanding of what counts as accomplished teaching

In Denmark, there is no national framework of teaching standards, a clear and concise statement or profile of what teachers are expected to know and be able to do. There are no uniform performance criteria and a reference against which teachers are appraised. Teaching standards are essential to guide any fair and effective system of teacher appraisal given the need to have a common reference of what counts as accomplished teaching (OECD, 2005b). This weakens the capacity for the school system to effectively assess teacher performance, including in the employee dialogues established in some

municipalities between the school principal and the teacher. Teaching standards are a key element in any teacher appraisal system as they provide the credible reference for making judgements about teacher competence.

Teacher appraisal is not systematic across the system and is not perceived as meaningful

Teacher appraisal is not a consolidated practice in Danish schools. There is no expectation that each teacher in the *Folkeskole* has his or her practice appraised and receives feedback for improvement. The existing teacher appraisal practices are the initiative of individual schools (in some cases in the context of municipality's requirements) and depend essentially on the endeavour of the school principal and the evaluation ethos created in the school. As such, there is great variation between schools in the way teacher appraisal and feedback is conceptualised and carried out, from a very light-touch approach to more elaborate processes in some schools. The OECD review team saw examples of schools with established practices of formative teacher appraisal, including classroom observation and peer feedback, but also examples of schools where teachers had few opportunities to receive professional feedback. Where it exists, the employee dialogue is often limited in its ability to provide feedback for teacher's development. Therefore there are no guarantees in Danish schools that approaches to teacher appraisal and feedback are addressing the real issues and complexities of teaching and learning. There is no mechanism to ensure minimum standards for teacher appraisal processes in schools and so there is no guarantee each teacher receives proper professional feedback. This also means that in those schools where teacher appraisal processes are weak, it might be difficult to identify and address underperformance.

Some form of appraisal of and feedback to teachers seems to take place. According to TALIS, only 14.2% of teachers of lower secondary education reported never receiving appraisal and/or feedback from the principal about their work (9th lowest figure, against a TALIS average of 22.0%). About 68% of teachers of lower secondary education reported receiving such appraisal and/or feedback at least once a year.

However, there seems to be the perception that appraisal and feedback has little impact. According to TALIS, Danish teachers of lower secondary education are the most negative in their perceptions of the impact of teacher appraisal and/or feedback. In fact, the proportion of lower secondary teachers who reported that the appraisal and/or feedback they received led to or involved moderate or large changes is the lowest among TALIS countries across a range of practices: 18.2% for classroom management practices (against a TALIS average of 37.6%); 10.9% for knowledge or understanding of the teacher's main subject field (against a TALIS average of 33.9%); and 11.1% for knowledge or understanding of instructional practices (against a TALIS average of 37.5%). Also, 60.8% of teachers of lower secondary education agree or strongly agree that the review of teachers' work has little impact upon the way teachers teach in the classroom (4th highest figure, against a TALIS average of 49.8%).

In general, there seems to be an issue about how teacher appraisal by the school principal is perceived by teachers. A study by the Danish Evaluation Institute indicates that often the involvement of school management in teacher appraisal is perceived as an attempt of control rather than a tool for quality development (EVA, 2007).

It should also be noted that there is no probationary period for newly qualified teachers in the *Folkeskole*. Hence, the school system does not have mechanisms to identify those new recruits who struggle to perform well on the job or find that it does not meet their expectations.

Teachers have few opportunities for formal recognition

Teacher appraisal at the school level is not perceived as an instrument to reward teachers, which is not surprising as teacher appraisal procedures essentially have a formative purpose in Denmark. For instance, according to TALIS, only 15.0% of teachers of lower secondary education agree or strongly agree that in the school the most effective teachers receive the greatest monetary or non-monetary rewards (13th lowest figure, against a TALIS average of 26.2%). Similarly, only 8.3% of teachers of lower secondary education agree or strongly agree that in the school if they improve the quality of their teaching they receive increased monetary or non-monetary rewards (5th lowest figure, against a TALIS average of 25.8%). The principle of associating good performance to career progression is not in place in Denmark.

The same seems to occur in relation to more informal means of recognition. According to TALIS, 25.3% of teachers of lower secondary education reported that the appraisal and/or feedback they received led to a moderate or large change in the public recognition from the principal and/or their colleagues (7th lowest figure, against a TALIS average of 36.4%).

Teacher appraisal could be more effective in addressing underperformance

There are some indications that teacher appraisal is not effectively fulfilling its function of addressing underperformance. On the one hand, teachers' identified weaknesses seem to be relatively well addressed through support measures provided to teachers. The following proportion of Danish lower secondary teachers are in schools where the principal reported that the following measures are always taken to address weaknesses in their teaching as identified by teacher appraisal: *(i)* The principal ensures that measures to remedy the weakness in their teaching are discussed with the teacher: 61.0% (13th highest figure against a TALIS average of 58.9%); *(ii)* The principal, or others in the school, establishes a development or training plan for the teacher to address the weakness in their teaching: 20.8% (10th highest figure against a TALIS average of 20.6%); and *(iii)* The principal ensures that the teacher has more frequent appraisals of their work: 17.1% (9th highest figure against a TALIS average of 15.2%).

On the other hand, there seems to be the perception that sustained underperformance is not as well addressed. According to TALIS, 40.7% of teachers of lower secondary education agree or strongly agree that in the school the sustained poor performance of a teacher would be tolerated by the rest of the staff (8th highest figure, against a TALIS average of 33.8%). In addition, only 6.6% of teachers of lower secondary education agree or strongly agree that in the school the school principal takes steps to alter the monetary reward of the persistently underperforming teacher (3rd lowest figure, against a TALIS average of 23.1%). Similarly, 35.0% of teachers of lower secondary education agree or strongly agree that in the school teachers will be dismissed because of sustained poor performance (6th highest figure, against a TALIS average of 27.9%).

The extent of externality in teacher appraisal is limited

Teacher appraisal, when it is organised, is school-based and rarely involves agents external to the school. According to TALIS, 69.7% of teachers of lower secondary education reported having received no appraisal and/or feedback from an external individual or body (*e.g.* external reviewer) about their work in the school (5th highest figure, against a TALIS average of 50.7%). The municipal quality reports rarely engage in a closer look at the quality of the teaching and involve little interaction with individual teachers. Practices are somewhat different in the private independent sector: external teacher appraisal is slightly more common given that parent's exert responsibility to supervise schools and are required to recruit individuals with expertise to oversee the quality of the teaching in school.

The limited extent of externality in teacher appraisal raises a number of challenges. Teachers are appraised according to local judgements and appraisal criteria. Teachers are also entirely dependent on local capacity and willingness to benefit from opportunities to improve their practice, see their professional development recognised and gain greater responsibility as they evolve in the profession. The involvement of some externality in teacher appraisal can provide an element of distance and rigour which can be particularly valuable in validating school-based approaches to teacher appraisal.

Teachers have few opportunities for feedback and could benefit from more pedagogical leadership

Danish teachers have relatively few opportunities for professional feedback. The main opportunity to receive feedback on their practices is the dialogue with the school principal, sometimes in the formal setting provided by the employee dialogue. However, school principals are overwhelmed with tasks at the school and, in general they do not seem to have the time to engage properly in the coaching, monitoring, and appraisal of teachers. For example, classroom observations by school principals seem to be relatively occasional. In a study from the Danish Evaluation Institute, 82% of the teachers in the 20 participating schools indicated that their school principal had not observed their teaching in the previous year (EVA, 2007).

According to TALIS, the following proportion of Danish teachers of lower secondary education reported that the following were considered with high or moderate importance as a criterion in the appraisal and/or feedback they received: *(i)* Direct appraisal of classroom teaching: 40.7% (lowest figure against a TALIS average of 73.5%); *(ii)* Classroom management: 61.6% (lowest figure against a TALIS average of 79.7%); *(iii)* Innovative teaching practices: 35.7% (lowest figure against a TALIS average of 70.7%); *(iv)* Student feedback on the teaching they receive: 60.7% (7th lowest figure against a TALIS average of 72.8%); and *(v)* Feedback from parents: 56.4% (4th lowest figure against a TALIS average of 69.1%). According to the PISA survey, 32.0% of 15-year-old students are in schools where the principal reported that teacher peer review (of lesson plans, assessment instruments, lessons) has been used the previous year to monitor the practices of teachers at their school (6th lowest figure against an OECD average of 56.3%). Overall, there is scope for improvement in areas such as classroom observation, peer discussion, coaching, or self-critical analysis. Also, instructional leadership in schools is not a system-wide expectation (see Chapter 6).

As mentioned earlier, opportunities for feedback are greater within teacher teams formed in schools and with the evaluation advisor if available in the school. School assessment rarely provides an opportunity for professional feedback as municipal quality reports only vaguely address quality teaching and rarely engage the school principal in an interaction with individual teachers.

The absence of career opportunities for effective teachers undermines the role of teacher appraisal

There does not seem to be a career path for effective teachers. The role of team leader is not regarded as a major step in the career and no other steps exist. There are few opportunities for promotion, greater recognition and more responsibility. This is likely to undermine the potentially powerful links between teacher appraisal, professional development and career development. According to TALIS, 19.0% of teachers of lower secondary education reported that the appraisal and/or feedback they received led to a moderate or large change in working responsibilities that make the job more attractive (10th lowest figure, against a TALIS average of 26.7%).

Missing links between teacher appraisal, professional development and school development

The OECD review team formed the view that the provision of professional development appears not thoroughly planned, fragmented and not systematically linked to teacher appraisal. According to TALIS, only 12.4% of teachers of lower secondary education reported that the appraisal and/or feedback they received directly led to or involved moderate or large changes in a teacher development or training plan to improve their teaching (lowest figure, against a TALIS average of 37.4%). Also, only 25.6% of teachers of lower secondary education reported that the appraisal and/or feedback they received led to a moderate or large change in opportunities for professional development activities (10th highest figure, against a TALIS average of 23.7%). In most cases, the identification of professional development needs is not a requirement of established teacher appraisal practices. In Denmark, there is no consistent means to base professional development needs on a thorough assessment of teaching practice. Without a clear link to professional development opportunities, the appraisal process is not sufficient to improve teacher performance, and as a result, often becomes a meaningless exercise that encounters mistrust – or at best apathy – on the part of teachers being evaluated (Danielson, 2001; Milanowski and Kimball, 2003; Margo *et al.*, 2008). The shortcomings in the provision of professional development in the *Folkeskole* were also noted by the report of the 'Flying Squad' which reviewed practices in the *Folkeskole* (Danish School Agency, 2010; see Box 2.1).

There is also scope to better link professional development to school development. In the OECD review team's view, school development could better explore its links to the evaluation of teaching practice. This is in part due to the limited time school principals have for pedagogical leadership and the limited extent to which professional development activities are linked to the results of teacher appraisal. But it also stems from the fact that professional development activities are mostly an individual teacher's choice and are often not associated with school development needs.

Limited municipal capacity to assess the quality of the teaching and learning at the school level

While municipalities are the employers of teachers, most delegate the assessment of the quality of the teaching and learning as well as teacher appraisal to school principals. Few municipalities have evaluation and assessment frameworks and strong competencies and skills to monitor the quality of services provided by their schools, including the external appraisal of teachers. Municipal quality reports typically do not contain an assessment of the quality of the teaching in schools. This limits the ability for teachers to receive professional feedback by their employer and a validation of their work by an entity external to the school.

5.3 Pointers for future policy development

The development of meaningful teacher appraisal in Denmark is a vital step in the drive to improve the effectiveness of teaching and learning and to raise educational performance. The effective monitoring and appraisal of teaching is central to the continuous improvement of the effectiveness of teaching in a school. It is essential to know the strengths of teachers and those aspects of their practice which could be further developed. In order to make teacher appraisal more effective in the Danish *Folkeskole*, the OECD review team proposes the following approach:

- Develop teaching standards to guide teacher professional development and appraisal;
- Create a career structure with key stages;
- Introduce a system of teacher certification to determine career progression;
- Introduce a mandatory probationary period for new teachers;
- Strengthen developmental teacher appraisal and hold school principals accountable for this;
- Ensure links between developmental appraisal and appraisal for certification;
- Reinforce linkages between teacher appraisal, professional development and school development;
- Ensure appropriate articulation between school evaluation and teacher appraisal.

The detailed suggestions and the associated arguments are provided below (see Santiago and Benavides, 2009, for a detailed conceptual framework for teacher appraisal).

Develop teaching standards to guide teacher professional development and appraisal

A framework of teaching standards is essential as a reference for teacher appraisal. The development of a clear and concise statement or profile of what teachers are expected to know and be able to do should be a priority in Denmark. The preparation of a profile of teacher competencies should be based on the objectives for student learning (the Common Objectives). Teachers' work and the knowledge and skills that they need to be effective must reflect the student learning objectives that schools are aiming to achieve.

In recognition of the variety of tasks and responsibilities in today's schools and the teaching expertise developed while on the job, teaching standards should express different levels of performance such as competent teacher, established teacher, and accomplished/expert teacher. These should reflect teachers' tasks in schools and the knowledge and skills that they need to acquire to be effective at the different stages of their careers to achieve student learning objectives. They need to reflect the sophistication and complexity of what effective teachers are expected to know and be able to do; be informed by research; and benefit from the ownership and responsibility of the teaching profession. It also needs to be ensured that the teaching standards provide the common basis to organise the key elements of the teaching profession such as initial teacher education, teacher certification (see below), teachers' professional development, career advancement and, of course, teacher appraisal.

Create a career structure with key stages

The OECD review team has noted that the absence of career opportunities for effective teachers undermines the role of teacher appraisal. Schools and teachers could benefit from a career structure for teachers that comprised (say) three key stages: competent teacher; established teacher, and accomplished/expert teacher. The different stages in the career should be associated with distinct roles and responsibilities in schools associated with given levels of teaching expertise. Access to each of the key stages could be associated with formal processes of appraisal through a system of teacher certification (see below).

The career structure for teachers should match the different levels of expertise reflected in teaching standards. Such alignment would reflect the principle of rewarding teachers for accomplishing higher levels of expertise through career advancement and would strengthen the linkages between roles and responsibilities in schools (as reflected in career structures) and the levels of expertise needed to perform them (as reflected in teaching standards). A career structure for teachers reflecting different levels of expertise is likely to enhance the links between teacher appraisal, professional development and career development.

Introduce a system of teacher certification to determine career progression

The teaching profession in Denmark would benefit from teacher appraisal at key stages in the teaching career to formalise the principle of advancement on merit associated with career opportunities for effective teachers. Such appraisals, which are more summative in nature, need to have a stronger component external to the school and more formal processes. They could be organised through a system of teacher certification with (say) access to three key stages: competent teacher (following a probationary period – see below), established teacher; and accomplished/expert teacher. It could be a mostly school-based process led by the school principal (or another member of the management group) but it should include an element of externality such as an accredited external evaluator, typically a teacher from another school with expertise in the same area as the teacher being appraised. Examples of consolidated teacher certification/registration models are those of several states in Australia (Australian Government Department of Education, Employment and Workplace Relations, 2011).

Teacher appraisal for certification would have as its main purposes holding teachers accountable for their practice, determining their career advancement, and informing their professional development plans. This approach would convey the message that reaching high standards of performance is the main road to career advancement in the profession. Access to levels of certification beyond "competent" level should be through a voluntary application process and teachers should be required to periodically maintain their certification status when not applying for a promotion.

Reference criteria

The appraisal system associated with the certification process should be founded on the national framework of teaching standards. A reference contribution in this area is the Danielson's *Framework for Teaching* (1996, 2007), which is articulated to provide at the same time "a 'road map' to guide novice teachers through their initial classroom experiences, a structure to help experienced professionals become more effective, and a means to focus improvement efforts". The *Framework* groups teachers' responsibilities into four major areas further divided into components:

- *Planning and Preparation*: demonstrating knowledge of content and pedagogy; demonstrating knowledge of students; selecting instructional goals; designing coherent instruction; assessing student learning.
- *The Classroom Environment*: creating an environment of respect and rapport; establishing a culture for learning; managing classroom procedures; managing student behaviour and organising physical space.
- *Instruction*: communicating clearly and accurately; using questioning and discussion techniques; engaging students in learning; providing feedback to students; demonstrating flexibility and responsiveness.
- *Professional Responsibilities*: reflecting on teaching; maintaining accurate records; communicating with families; contributing to the school and community; growing and developing professionally; showing professionalism.

This framework has influenced a large number of teacher appraisal systems around the world. An example can be found in the *Professional Standards for Teachers* in England (TDA, 2007). These standards cover all aspects grouped into 'professional attributes' – including relationships with children and young people, 'professional knowledge and judgement' and 'professional skills'. Moreover, the standards differentiate in several stages from what can be expected of the newly qualified teacher to the standard expected of excellent and advanced skills teachers (see Santiago *et al.*, 2009, for further details).

It is important that teacher appraisal for certification takes account of the school context, and includes the views of the school principal. Schools have to respond to different needs depending on the local context and face different circumstances, especially in a system as decentralised as Denmark. Hence it is desirable that individual teachers are evaluated against reference standards with criteria that account for their school's objectives and context.

Instruments

Teacher appraisal for certification could rely on three core instruments: classroom observation, self-appraisal and documentation of practices in a simplified portfolio. It should be firmly rooted in classroom observation. Most key aspects of teaching are displayed while teachers interact with their students in the classroom. It should also involve an opportunity for teachers to express their own views about their performance, and reflect on the personal, organisational and institutional factors that had an impact on their teaching. In this respect, the tools available in the *Evaluation portal* for teacher self-appraisal are particularly instrumental. The portfolio should allow teachers to mention specific ways in which they consider that their professional practices are promoting student learning, and could include elements such as: lesson plans and teaching materials, samples of student work and commentaries on student assessment examples, teacher's self-reported questionnaires and reflection sheets (see Isoré, 2009). Given the high-stakes of appraisal for certification, decisions must draw on several types of evidence, rely on multiple independent evaluators and should encompass the full scope of the teacher's work.

Training

External evaluators would receive specific training for this function, in particular in standards-based methods for assessing evidence of teacher performance, and would need to be accredited by the proper organisation. Evaluators need be trained to assess teachers according to the limited evidence they gather, the criteria of good teaching and the corresponding levels to attain certification. Second, evaluators should be trained to also provide constructive feedback to the teacher for further practice improvement.[18] Also, substantial activities for professional development on how to best use appraisal processes should be offered to teachers. It is vitally important that teachers are provided with support to understand the appraisal procedures and to benefit from appraisal results. It is also expected that appraisal and feedback become core aspects offered in teacher initial teacher education. Finally, if teacher certification is essentially school-based, it would also be desirable to establish moderation processes to ensure consistency of school approaches to appraisal for teacher certification.

Consequences

The main decision refers to the certification for teachers to access the key stages of the profession. This would be in accordance with the career structure, with each key stage associated with pay levels to be agreed in national agreements between the employers and the teacher unions. This would ensure a link between teacher appraisal results and career progression, therefore establishing an indirect link with pay levels. This is a desirable option as direct links between teacher performance and pay have produced mixed results, according to the research literature (Harvey-Beavis, 2003; OECD, 2005b). It is also important that appraisal for certification informs the professional development plan for the teacher.

18. For further details on the range of characteristics and competencies for evaluators see, for example, Santiago *et al.* (2009).

Introduce a mandatory probationary period for new teachers

A formal probationary process for new teachers can provide an opportunity for both new teachers and their employers to assess whether teaching is the right career for them. The satisfactory completion of a probationary period of one to two years teaching should be mandatory before certification (at the 1st level of the certification system) or a permanent teaching post is awarded. Beginning teachers should be given every opportunity to work in a stable and well-supported school environment, and the decision about certification should be taken by a panel which is well trained and resourced for assessing new teachers. The successful completion of probation should be acknowledged as a major step in the teaching career, corresponding to the access to the 1st stage of the career structure.

Strengthen developmental teacher appraisal and hold school principals accountable for this

The OECD review team is of the view that there needs to be a stronger emphasis on teacher appraisal for improvement purposes (*i.e.* developmental appraisal). Given that there are risks that the improvement function is hampered by the high-stakes teacher appraisal associated to the certification process, we propose that a component predominantly dedicated to developmental appraisal, fully internal to the school, be created. This suggestion is in line with the recommendation by the Chairmanship of the School Council for school management (and other teachers) to engage in the regular professional appraisal of individual teachers in the school (Skolerådet, 2010).

This development appraisal would have as its main purpose the continuous improvement of teaching practices in the school. It would be an internal process carried out by line managers, senior peers, and the school principal (or members of the management group). The reference standards would be the teaching standards but with school-based indicators and criteria. This appraisal should also take account of the school objectives and context. The main outcome would be feedback on teaching performance as well as on the overall contribution to the school which would lead to a plan for professional development. It can be low-key and low-cost, and include self-appraisal, peer appraisal, classroom observation, and structured conversations and regular feedback by the school principal and experienced peers. It could be organised once a year for each teacher, or less frequently depending on the previous assessment by the teacher. The key aspect is that it should result in a meaningful report with recommendations for professional development. To be effective, appraisal for improvement requires a culture in which there is developmental classroom observation, professional feedback, peer discussion and coaching opportunities.

There are advantages to having the principal and/or other teachers as the assessors in developmental appraisal given their familiarity with the context in which teachers work, their awareness of the school needs and their ability to provide quick and informed feedback to the teacher. However, it might prove difficult for principals to undertake the thorough assessment of each teacher in the school. In addition, most principals have no prior training in evaluation methods and might not have the content expertise relevant to the teaching areas of the teacher being evaluated. Hence, it might prove valuable to build capacity in appraisal methods at the school level by preparing members of the management group or accomplished/expert teachers to undertake specific evaluation functions within the school. In the context of developmental appraisal, evaluation advisors could have a reinforced and clearer role: the position could be formalised and schools could benefit from resources to create such positions.

In order to guarantee the systematic and coherent application of developmental evaluation across Danish schools, it would be important to undertake the external validation of the respective school processes. An option is that school review processes, in their monitoring of the quality of teaching and learning, include the audit of the processes in place to organise developmental evaluation, holding the school principal accountable as necessary. Municipalities would play an important role of support ensuring that schools develop ambitious developmental appraisal processes to be properly documented in quality reports.

Ensure links between developmental appraisal and appraisal for certification

Developmental appraisal and appraisal for certification cannot be disconnected from each other. A possible link is that appraisal for certification needs to take into account the qualitative assessments produced through developmental appraisal, including the recommendations made for areas of improvement. Developmental appraisal should also have a function of identifying sustained underperformance. Similarly, results of teacher certification assessments can also inform the professional development of individual teachers.

Reinforce linkages between teacher appraisal, professional development and school development

The linkages between teacher appraisal, professional development and school development need to be reinforced. Teacher appraisal is unlikely to produce effective results if it is not appropriately linked to professional development which, in turn, needs to be associated with school development if the improvement of teaching practices is to meet the school's needs. Schools that associate the identified individual needs with the school priorities, and that also manage to develop the corresponding professional development activities, are likely to perform well (Ofsted, 2006). Schools can learn from the strengths of effective teachers and implement professional development programmes that respond to their weaknesses. This is in line with the recommendation by the 'Flying Squad' for engaging in a more strategic approach to professional development focused on schools' needs and the vision of school leaders, in a context of extra support and resources from the municipalities (Danish School Agency, 2010; see Box 2.1).

Effective operation of teacher appraisal and its contribution to school development will depend to a great extent on the pedagogical leadership of school principals. Given the central role of principals in Denmark's decentralised system, it is difficult to envisage either productive teacher appraisal or effective school development without such leadership. Other education systems have increasingly recognised the importance of school leadership in raising standards, as substantiated in an OECD report (Pont *et al.*, 2008). Teacher appraisal will only succeed in raising educational standards if school principals take direct responsibility for exerting pedagogical leadership and for assuming the quality of education in their schools. School principals are also more likely to provide informal continuing feedback to the teacher throughout the year and not only during the formal appraisal process. More generally, they are essential to make performance improvement a strategic imperative, and to promote teacher appraisal as being indispensable to teacher and school broader policies (Heneman *et al.*, 2007; Robinson, 2007; Pont *et al.*, 2008). Therefore the recruitment, training, professional development and evaluation of school leaders should be given great importance. This is in line with the

recommendations by the 'Flying Squad', which emphasise the centrality of the role of school principals (Danish School Agency, 2010; see Box 2.1). In addition, school principals need to spend appropriate time on their pedagogical role. It is our view that the concept of shared leadership needs to be more firmly embedded in schools, to support existing principals and allow them to concentrate on their pedagogical role. The introduction of the role of evaluation advisor is particularly useful in this respect. School principals generally need better personnel support, and better training in human resource management, including teacher selection and appraisal.

Ensure appropriate articulation between school evaluation and teacher appraisal

Analysis from TALIS (OECD, 2009d) suggests that school evaluations can be an essential component of an evaluative framework which can foster and potentially shape teacher appraisal and feedback. Given that the systems of school evaluation and teacher appraisal and feedback have both the objective of maintaining standards and improving student performance, there are likely to be great benefits from the synergies between school evaluation and teacher appraisal. To achieve the greatest impact, the focus of school evaluation should either be linked to or have an effect on the focus of teacher appraisal (OECD, 2009d). This indicates that the external review of schools should comprise the monitoring of the quality of teaching and learning (see Chapter 6). Also, as indicated above, school review should comprise the external validation of the processes in place to organise developmental appraisal, holding the school principal accountable as necessary. Linkages between school review and teacher appraisal would also greatly benefit from the improvement of skills and competencies for evaluation within municipalities.

In the context of school self-evaluation, it is also important to ensure the centrality of the appraisal of teaching quality and the appraisal of individual teachers. The quality of teaching and the learning results of students are predominantly regarded as a responsibility of groups of teachers or of the school as a whole. In this light, school self-evaluation needs also to put emphasis on assessing the appropriateness of mechanisms both for internal developmental appraisal and for following up on the results of appraisal for certification.

Chapter 6

School Evaluation

The introduction of mandatory municipal quality reports has been accompanied by central efforts to build municipal capacity. The common set of indicators in the municipal quality reports does not sufficiently address the quality of teaching and learning. The internal and external evaluation of schools should be based on an agreed set of formal criteria of school quality. Municipal quality reports provide an agenda for dialogue between the municipality and the school principal, plus municipalities are required to produce action plans for schools that are underachieving. However, the degree of follow-up by municipalities varies and is not always rigorous and objective. Outcome data and evaluation results should form a core part of the municipal monitoring system and discussion and follow-up with schools for improvement. Well led schools benefit from effective use of central or municipal self-evaluation guidelines, plus the rapid availability of results from the national tests. However, this is not the predominant culture. A requirement for schools to produce an annual quality report could be an effective stimulus for school self-evaluation.

This chapter analyses approaches to school evaluation within the Danish evaluation and assessment framework. School evaluation refers to the evaluation of individual schools as organisations. This chapter covers both internal school evaluation (*i.e.* school self-evaluation) and external school evaluation (such as inspections).

6.1 Context and features

The approaches to evaluation are different for public and private schools in Denmark. The differences relate to the ways in which the two sectors are funded and governed. Only schools in the private sector are subject to inspections. While in the first Form of primary education around 12% of children are enrolled in private independent schools, a high proportion of students attend independent boarding schools in Forms 8 to 10, so the overall proportion of students following compulsory education in private schools is almost one-fifth.

Supervision and evaluation of private independent schools

In private independent schools, parents are responsible for supervising the general school activities. The parents are obliged to choose a person (the school principal) with professional and pedagogical qualifications to supervise the teaching of the school. In addition, the Ministry of Education conducts inspections of the quality of teaching. The Ministry of Education can also undertake an enhanced inspection of a school. The Ministry may conclude that the school is subject to exclusion from the scheme for public financial support for private primary and lower secondary schools. On 1 August 2010, new rules of inspection came into force. Schools can now choose to implement self-evaluation as an alternative to a visit by an inspector elected by the parents. Furthermore, the inspector must have taken part in a special training programme focused on inspecting education and must be certified by the Ministry of Education. The involvement of the state in inspection of private schools is a consequence of these schools receiving substantial government subsidies for the majority of their expenditure.

Supervision and evaluation of the Folkeskole

In Denmark, each of the 98 municipalities is responsible for running the public schools – *Folkeskole* – in their areas. The municipality defines the goals and scope for the school activities within a framework of objectives set at national level. The chain of accountability and responsibility leads to the school principal. The school principal is employed by the municipality and 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 board. In particular, the school principal manages and distributes the work between the school staff, drafts proposals for the school 'principles' (aims and values), is responsible for the school budget and takes decisions concerning the students. The school principal must work closely with the school staff, although teachers are formally employed by the municipal district council, following a recommendation from the school board, in practice the school principal recruits the teachers.

Since on the one hand the municipality establishes its own objectives and scope for the schools, determines local guidelines and special initiatives, manages the expenditure and formally appoints the teaching staff of schools, and on the other hand the school

board imposes requirements for school activities and performs other tasks defined in the *Folkeskole* Act, there appear to be many constraints on the accountability of school principals for the effectiveness of their schools. The situation is further complicated by the school councils, which provide a mechanism for students and parents to work together with the school to meet the overall objective of the *Folkeskole*, as required in law. The municipality exercises its supervisory role through the school principals that it employs.

The municipality also supervises its schools and is responsible for the quality control of them. In practice – which stems from an amendment to the *Folkeskole* Act – the municipal district council has to assess and publish the academic performance of its schools in an annual quality report. If poor quality provision is identified at a public school, the municipal district council must present an action plan for it.

6.2 Strengths and challenges

Strengths

The introduction of a quality system involving municipalities and the Folkeskole

The requirement for each municipal council to produce an annual quality report on the *Folkeskole* was introduced in 2006. The quality report is a tool that serves to:

- "Ensure systematic documentation as well as collaboration among local politicians, municipal authorities and schools on the evaluation and quality of schools.
- Strengthen the municipal district councils' ability to maintain their responsibility for the schools by providing them with reliable and timely documentation on the school system.
- Provide the municipal councils with reliable information on which to judge the level of quality of the public schools and make decisions for further development of the schools.
- Provide transparency on school quality" (as interpreted by EVA, 2009b).

In practice, quality and development reports are generally prepared by the schools and forwarded to the municipal council after taking account of comments from the school board. The municipal council then combines all the reports into a quality report for the schools in the municipality. The schools and municipalities with whom the quality report was discussed responded positively to this development, but thought that the quality reports could be further developed in the future. It is reported that "many local municipalities now make use of the quality report in developing their school system" (EVA, 2009b), although current evidence suggests wide variation in practice. Where there is dialogue about the report between schools and education officers resulting in some specific goals for schools, there may be little subsequent follow-up. Schools place their quality and development report on their websites, rather as an advertisement for the school. Although the major proportion of the quality report is prescribed by regulation, schools and municipal councils have some freedom to decide what else they include. The generation and discussion of quality reports has been beneficial to promoting dialogue

between the different parties. They also contribute to making the work of schools more transparent. But the quality of the reports and use to which they are put are reported to vary greatly between municipalities. The Danish Evaluation Institute is providing services to improve the capacity of municipalities, including tools and guidelines for the self-evaluation of schools and KL and some municipalities have also developed support materials.

The expectation that quality reports will lead to positive action

It is an important feature of quality reports that they are intended to be the basis of further action in managing the system at the level of the municipality. First, they are intended to provide an agenda for dialogue between the municipality and the school principal. At its best, such discussion is based on robust analysis of the school's efficiency and performance, resulting in an objective consideration of the school principal's performance and redefining personal and school objectives. There is an opportunity to set aspirational targets which, replicated on a large scale, could contribute to the improvement of educational performance nationally. Such dialogue should be both challenging and supportive, but at present there is much variation in whether and how it is conducted and what impact it has. Box 6.1 shows the approach used in Odense.

Second, the quality reporting process requires municipalities to produce action plans for schools that are underachieving. This should be an important lever for school improvement provided the school has the capacity to take the necessary steps. International experience shows that this is not necessarily the case. Indeed it often takes a change of leadership to turn a school around (Matthews and Sammons, 2005). The School Council has commissioned a specific study by EVA to shed more light on how municipalities follow up on action plans for schools (Skolerådet, 2010). Representatives from EVA informed the OECD review team that they are closely examining three municipalities that had included clear follow-up plans in their quality reports and that results would be available in June 2011.

Box 6.1 Assessing and improving school quality in Odense

Odense piloted a quality system in five schools in autumn 2006 in response to a negative assessment by EVA in 2005. After the pilot was successfully evaluated, this 'Quality in Schools' (KIS) system was implemented in all schools in Odense with a view to maintaining high-quality teaching and pedagogical practice. At the heart of the system is an assessment chain including students, teacher teams, school leaders, school boards and the Odense administration and political leaders. There are clear roles for each stakeholder in the assessment chain. Each school draws up its own criteria of what constitutes good teaching and good pedagogical practice. This starts with documentation of student achievement and learning processes by teachers in specific courses. Through the assessment chain, pedagogical documentation is turned into political documentation and promotes reflection and dialogue at all levels.

Stakeholder	Roles
School team (teachers and social educators)	• Produce team notes on student achievement/learning processes • Participate in evaluations with School Leadership
School Leadership	• Conduct evaluations based on school team notes • Produce evaluation on quality in teaching and the pedagogical practice (summarise status and assess quality according to criteria for good teaching) • Ensure system objects are described • Outline possible follow-up • Participate in meeting on school quality with Odense Administration
School Board	• Comment on School Leadership quality assessment report • Provide comments for Odense's quality report • Can include its report in the annual School Board report
Odense Administration	• Conduct quality talks with School Leadership based on the quality system reports • Produce written evaluation for each school • Produce full report on quality of Odense schools

Source: Odense Kommune (2010).

More information and tools available to schools for self-evaluation and improvement

Despite significant disagreements about the introduction, value and demands made by the introduction of individual student plans (ISPs), there is little doubt that they have focused teachers' minds on the progress of students in different subjects. Law stipulates that the ISPs should be drawn up at least once a year, but schools are free to make their own policies to use these more and during the OECD review we saw examples of the ISPs forming the basis for a 20-minute discussion with students and parents about the goals set and how to ensure these are met (although such school-home interviews are not mandatory). The OECD review revealed considerable variation both in the quality of

entries by teachers and the extent to which protocols are followed (see Chapter 4): in some schools, the meeting has been held once only; students have not always been involved in dialogue about the ISPs; and some teachers criticised the time it takes to prepare them. The plans do however provide a mechanism for periodically reviewing each student's progress and involving students and parents in dialogue about it.

The OECD review also revealed that where schools use form-level tests and the new national tests well, teachers use the results to inform and cause them to reflect on the impact of their teaching. The rapid availability (next day) of results from the national computer-based tests is welcomed, particularly by teachers in well-led schools where there has been dialogue about the use that can be made of the tests. The national tests appeared to concern some teachers more than their students, for a variety of reasons including: fear of the tests including content that has not (yet) been taught and the fact that they only cover parts of the curriculum; and some opposition to the perceived intention of the government to publish the results on a school-by-school basis.

Achieving the first steps in building an evaluation culture

The Danish evaluation framework has addressed to some extent the need identified by the OECD (2004a) for evaluation at school and municipal level by introducing:

- Municipal quality reports;
- School profiles on line;
- The possibility of interventions by the school board/parents/students/consultants.

These are all important and worthwhile steps which are beginning to impact on school accountability and improvement. In particular, the OECD review team agrees with the assessment of the Chairmanship of the School Council that the introduction of the quality reports has strengthened the evaluation culture in Danish schools (Skolerådet, 2010). However, while the implementation of the quality reports has introduced a more systematic approach to the documentation of school quality, the extent to which individual schools actively use the results of the quality reports in development activities is yet to be documented. The OECD review team identifies the following as particular strengths of the ongoing production of quality reports as part of the evaluation framework:

- The process of generating annual quality reports benefits from being developed co-operatively, by requiring schools and school boards to play an active part, both in providing data and in shaping the report. This gives schools and their boards a sense of ownership over the quality report, provided they see value in it and the data and information it contains. The opportunity to decide and shape some of the contents of the report is an important incentive to counteract the bureaucratic burden of collecting the 'framework data' required for inclusion in the report. As a result, there is a growing commitment to school review and self-review.
- Production of quality reports is resulting from the development of capacity in municipalities and schools to undertake school evaluation, although this is not yet applied extensively to the quality of teaching and learning, the core processes of the school. Having a national template, locally interpreted, involves consideration of local needs and context, promotes dialogue between different players and gives schools and their boards some ownership of the reports.

- The ongoing evolution of quality reports should make them more fit for purpose. Already, some municipalities and schools are taking initiatives and introducing innovations, using the flexibility permitted by the framework for quality reports. The evolutionary process involves dialogue about what is worth reporting and how it can be measured or estimated. This in turn prompts reflection and feeds the growth of the evaluation culture at the levels of school and municipal leadership.

There are many initiatives to build evaluation capacity at school and municipal levels. For example at the municipal level, the umbrella organisation for municipalities (KL) has launched several initiatives including notably the partnership of 35 municipalities (2007-2009) with a focus on management, the evaluation culture and professionalism in inclusive education, as well as producing various policy papers and conferences on evaluation. The former School Agency organised three annual conferences on quality assurance for municipalities and developed an on-line evaluation resource showing examples of different approaches that have been contributed by different municipalities throughout Denmark. This serves as a central knowledge base on municipal quality assurance development and monitoring and aims to promote collaboration and exchange among municipalities. Since 2008 EVA has offered 'EVA days' which offer municipalities the opportunity to share information on how they develop and use results of quality reports (EVA, 2010). The self-evaluation guidelines and other tools offered by EVA are valued by some school principals who feel empowered and confident to be more accountable for the effectiveness and performance of their schools. EVA reported to the OECD review team that the climate is fertile to strengthen and update these self-evaluation tools and to include more critical and reflective components. Armed with instruments that support evaluation, school principals have a great opportunity to take ownership of the evaluation agenda and re-professionalise their role as leaders.

Challenges

Defining what makes a good school

There does not appear to be an accepted model of school effectiveness in Denmark. Such a model would provide clear criteria for effective schools and provide a robust, research-based foundation for all internal and external evaluation. It would provide schools with criteria and benchmarks that would allow them to consider the evidence needed to rate their own effectiveness. 'How good is our school?' is a central question not only for students and parents the world over but for those who lead and work in schools. Similarly, 'How good are our schools?' is the question for municipalities. 'Good' in this context is synonymous with 'effective'. The school cannot give an account of its effectiveness unless it evaluates regularly 'how students benefit from teaching and other activities. Such an evaluation should form the basis for guidance for the individual student and for further planning of the organisation and form of teaching, including special interventions for the student. Similarly, the evaluation is also the basis for informing parents about the school's view of how the students are benefiting from the school, and their wellbeing at school in order to enhance further the ongoing dialogue between the school and home' (Christensen *et al.*, 2007). There are no doubt many good schools in Denmark, but as Collins (2001) said: "Good is the enemy of the great". . . "We don't have great schools principally because we have good schools." Equally, 'satisfactory' is the enemy of the good. In ambitious schools and municipalities, the answer to the questions posed above must be 'Not good enough!'

Refining the external (and internal) evaluation of the Folkeskole quality and performance

The 2004 OECD review emphasised a need for a stronger and more systematic approach to the ongoing assessment of school quality. The municipal quality reports have some strengths, as described above, but do not approach the heart of school quality. The national regulation specifies the information to be included in the municipal quality reports in three groups: "framework conditions", "pedagogical processes" and "results". The framework conditions include:

- Number of students receiving special pedagogical support;
- Number of students per class;
- Number of students per teacher;
- Student absence;
- Share of teacher working hours used for teaching;
- Implementation of planned hours;
- Competencies of teachers;
- Expenditure on in-service training.

This limited set of indicators is mainly concerned with efficiency measures: levels of provision and other input factors, with the exception of student absence. It is useful in providing input data at the level of the school, allowing provision to be monitored and if necessary re-distributed. But they are not quality indicators.

It cannot be said, either, that *descriptions* of pedagogical processes which comprise the second set of mandatory indicators in the municipal quality report say much about the *quality* of these processes. For example, "description of the continuous assessment of student outcomes" may describe the assessment processes but not what use is made of the assessments, for example, to advance children's learning, trigger intervention and support, and cause re-evaluation of the curriculum and pedagogy.

Only the third group of indicators, "results", has real meaning in giving the reader clear information about the effect of schooling. These results are appropriate outcome indicators, especially in the case of those indicators that have national validity and reliability.

Some of these shortcomings in the mandatory content of quality reports may indeed be addressed by the local indicators adopted by individual municipalities, although we have no evidence on the extent to which these include process indicators which reflect core processes like the quality of teaching and learning.

Given that municipal quality reports are currently the main instrument and product of school evaluation, internal or external (and their use is a combination of both), they are not sufficiently scientific or focused to diagnose the strengths and weaknesses of the school's core processes relating to teaching and learning and leadership. The reports contain indicators that are secondary to the pursuit of quality and that, in any case, should be available to municipalities without the schools having to find and supply the data. The reports also appear to lack critical independence and objectivity. Despite raising the profile of school accountability, they have little to say about quality of education at this stage of development.

Developing expertise in school self-evaluation

The OECD review revealed little evidence of school self-evaluation or observation-based appraisal of teachers. Professional dialogue is an important and deeply embedded part of school culture and often cited in answering questions about school self-evaluation. Dialogue is indeed an important part of a learning community, but runs the danger of being a medium without a message. Southworth (2009) summarised the leadership of learning in terms of "modelling, monitoring and dialogue". Dialogue, when part of this trilogy, has the authority that stems from demonstrating good practice and monitoring the effect of practice when discussing its strengths and how it could be improved. Joint planning and teamwork are strengths of many Danish schools, but the observation and evaluation of teaching and learning by managers or peers – followed by feedback, discussion and possibly coaching – is the exception rather than the rule. The OECD review team notes that KL has recognised the need for class observation by school leaders.

A professional culture of evaluation will only be embedded when professional practice (the craft of teaching) is openly shared among teachers and school leaders. Indeed, in schools where evaluation is encouraged, the students themselves provide feedback, even on occasion asking for harder books or more challenging work. But an evaluation culture which rests solely on dialogue – which the OECD review team assesses to still be the predominant culture in Denmark – lacks the discipline involved in arriving at an assessment of the quality or impact of practice through the collection of relevant evidence and analysis against a framework of principles, criteria or benchmarks for school improvement.

Limited teacher evaluation or appraisal

The evaluation culture does not extend to the systematic evaluation or appraisal of teachers (see Chapter 5). As mentioned above, the OECD review team formed the impression that while some school principals do visit classes, observe teaching and learning and discuss their observations with teachers, they appear to be in a minority. In many schools, teachers work in professional isolation once in their classroom. In order to build a professional development culture, it is necessary to establish authentic evaluation of teaching and learning, feedback and objective setting. This would require retraining, initially of school leaders. Ongoing development could be school-based if led by colleagues trained as facilitators. However, the main approach to professional development reported during the OECD review involved attending an external course.

Embedding municipal feedback to schools and follow-up of schools for school improvement

The feedback to schools based on the annual municipal quality reports is an important mechanism for school improvement. This is not always rigorous and objective, and the degree of follow-up is variable. Without robust evaluation, evidence-based feedback and a mechanism for monitoring and following up subsequent action, the municipal quality reports can have little impact on school improvement. If quality reports are to become part of the evaluation culture, they must lead to feedback and follow-up since evaluation in the Danish system has been described as "an important stepping stone for developing and improving school performance" (Regeringen, 2010). The OECD review team found that practice varied between municipalities. While many municipalities make use of the quality assurance reports in developing their school system, it has been suggested that

some municipalities may lack the capacity to take on the school improvement function. If so, there is a case for joining forces and sharing expertise.

An independent review, commissioned by the School Council and carried out by the Danish Evaluation Institute (EVA, 2009b), indicated that many municipalities:

- Need support in the active use of the quality reports, especially in relation to the follow-up processes on poor performing schools (the action plans).
- Face challenges in meeting the formal requirements of the quality reports, emphasising the need for tools and resources in the form of written guidelines on how to develop and report key figures, how to report on good practice, and how to use existing data from central databases.
- Prefer test results to take account of the socio-economic context of the schools to provide a more accurate measurement of their performance.
- Need clearer and more specified role assignments for the different actors involved in developing the quality reports – who delivers what and when?
- Prefer that the quality reports should include strengths and weaknesses of the individual schools in order to use the reports as an instrument for further school development. In addition, many municipalities suggest that this entails a shared understanding among local actors on how to use school assessment in developing and ensuring quality in schools.
- Develop follow-up or action plans for the school system rather than the individual schools.

The EVA review also reported that "in addition, we found little evidence of community involvement in the preparation of quality reports." This was borne out by oral evidence presented to the OECD review team by schools and municipalities.

The Quality and Supervision Agency is responsible for monitoring municipalities' quality reports and giving feedback, but describes its approach as being "very light touch". There are no reports on how the current approach to school assessment achieves the objectives of improvement and accountability, but the introduction of the quality reports is judged to be beneficial (Skolerådet, 2010). However, there is still room for improvement in relation to the strategic and systematic use of action plans by the municipalities. While the implementation of the quality reports has introduced a more systematic approach to the documentation of school quality, the extent to which individual schools actively use the results of the quality reports in development activities is yet to be documented. These weaknesses point to the need for thorough training of many municipal education directors and school principals in how to develop and make active use of quality reports.

Developing evaluation and school improvement capacity in municipalities and their schools

Despite the major initiatives that have been taken in developing the framework, the evaluation platform, tests, individual student plans and municipal quality reports – and consolidating these through regulation – our evidence suggests that much needs to be done to create an evaluation culture in municipalities that is more than tokenistic. The OECD review team found:

- Little evidence of community involvement in the preparation of municipal quality reports;
- Lack of capacity or will in appraising school principals' performance;
- Inconsistent application of evaluation and assessment tools;
- Low expectations and the lack of a performance culture;
- No clear answers to the questions: What is a good school? Good school principal? Good teacher?
- Significant variability and inconsistency in quality assurance practice;
- Little expectation that school principals are accountable for the quality of teaching and learning and results in their schools;
- Limited capacity and skills of schools to use data, including the early national test data, to best effect.

It appears that Denmark has aimed to develop an evaluation culture, but at the same time has limited capacity to conduct external evaluation of schools and municipalities. Independent external evaluation, often termed inspection, is only applied to private schools, where trained inspectors exist.

6.3 Pointers for future policy development

The OECD review team notes the progress that has been made in establishing an assessment and evaluation framework while identifying some of the challenges in embedding the framework within an evaluative culture. The challenge of creating a culture where accountability and responsibility are accepted, where dialogue is replaced by reflection and evidence-based enquiry into what works best and why, and where professional practice and knowledge are shared, is considerable. Kotter (*e.g.* 1996) and others have written persuasively on leading change. Two of his observations are relevant here, the first being that cultural change comes at the end of the process not at the beginning. The second is about the importance of personal example – modelling – in "anchoring new approaches in an organisation's culture". "A particularly important factor", he writes, "is a conscious attempt to show people how specific behaviours and attitudes have helped improve performance. When people are left on their own to make the connections . . . they can easily create inaccurate links" (Kotter, 1996). On the basis of the analysis of strengths and challenges in this chapter, the OECD review team proposes the following directions for policy development:

- Define formal criteria of school quality;
- Radically improve the value of quality reports to school self-evaluation and improvement;
- Review the role of school leaders and select, train and retrain them for that role;
- Identify the change leaders and replicate their practice;
- Strengthen the follow-up on school evaluation results;
- Promote and support capacity development in the external and internal evaluation of schools.

Define formal criteria of school quality

The internal and external evaluation of schools, including the municipal quality reports, should be based on a model or rationale for school effectiveness. Without this, the school evaluation framework lacks coherence. The characteristics for effective schools are well understood (Sammons, Hillman and Mortimore, 1995) and are broadly common to many national systems and school cultures. They relate to the quality of teaching and learning – which has much to do with the calibre of teachers (Barber and Mourshed 2007); the way teachers are developed and helped to become more effective throughout their careers (*e.g.* Barber and Mourshed 2007; Robinson *et al*., 2008); the quality of instructional leadership in schools (Leithwood *et al*., 2006) as well as factors concerning the curriculum, vision and expectations, assessment for learning, the rate of progress of students and their educational outcomes. Factors such as these are generally associated with the quality and standards of schools.

For example, key quality indicators for student outcomes and their rate of progress could include the extent to which:

- Every student in a school is making better than expected progress given their earlier attainment;
- Every student is pleased with the education at their school;
- Every student feels safe and happy at school;
- Every student gains the knowledge, skills, understanding and attitudes necessary for lifelong fulfilment, etc.

Radically improve the value of quality reports to school self-evaluation and improvement

The OECD review team encourages Denmark to continue to develop the quality reports which have established a platform for accountability and improvement. We recommend that this should be done in ways which encourage and take greater account of school self-evaluation and teacher appraisal, and that put the quality of teaching and learning at the heart of the process. The OECD review team notes the recommendation by the 'Flying Squad' (see Box 2.1) for schools to publish their own quality reports, plus reports from many municipalities that they would prefer quality reports to include strengths and challenges for individual schools (see above). The process of producing an annual quality report would be a stimulus for many schools to further their self-evaluation practices and holds strong potential for school improvement, if: the quality report pays sufficient attention to key processes of teaching and learning and a broad range of outcomes; the process of drawing up the report adequately engages the school community. In Sweden, the involvement of school staff, students and parents in producing annual quality reports and their focus on monitoring school improvement (NAE, 2005a) has contributed to establishing a school self-evaluation culture. In fact, based on stakeholder feedback, the OECD judged that teachers had a sense of ownership over the school self-evaluation and it emphasised democratic dialogue and that these were 'highly valuable asset(s) which should be preserved' (Nusche *et al.*, 2011). Van Hoof and Van Petegem (in press) offer some principles and indicators to maximise the development of an effective school self-evaluation process (see Box 6.2).

Box 6.2 Designing and evaluating the process of school self-evaluation

Based on empirical evidence and a research study in Flemish schools, Van Hoof and Van Petegem (in press) highlight that school self-evaluation is 'a complex undertaking that has to be approached in a carefully thought out manner and in line with overall school policy'. They offer seven basic principles that interrelate and should be viewed as a whole, where the school team:

- **Is prepared to engage in systematic reflection**, *e.g.* team members are prepared to examine their own professional practice critically and confident that results will not be used improperly, there is sufficient openness and trust, etc.
- **Works towards shared objectives**, *e.g.* there are clear objectives for the self-evaluation and these are set out in writing, the team understands the criteria that will be used to test the success of the self-evaluation, etc.
- **Uses shared leadership as a means of creating involvement**, *e.g.* self-evaluation in not just a matter for the school management, decision making procedures are transparent and team members have the chance to be involved, the degree of acceptance by team members is considered when making choices, school uses all possible in-house expertise when making decisions, etc.
- **Communicates effectively**, *e.g.* communication is carried out in a co-ordinated manner, all those involved are properly informed about the objectives of the self-evaluation, there is open communication about the results, etc.
- **Seeks to create supportive relationships and collaboration**, *e.g.* the team has sufficient backing to carry out the self-evaluation successfully, collaboration avoids duplication of tasks, there is mutual trust between school management and team members, etc.
- **Integrates the self-evaluation process into existing school policy**, *e.g.* the objectives of self-evaluation are linked to other initiatives in the school, self-evaluation looks at policy aspects as well as educational aspects, make use of existing committees/work groups, etc.
- **Is responsive with regard to internal and external expectations concerning the self-evaluation process**, *e.g.* the expectations of external actors are taken into account from the start, the self-evaluation process involves a critical friend, the self-evaluation actively seeks the input of the local community and takes account of general social issues, etc.

Source: Van Hoof and Van Petegem (in press).

Singapore offers an interesting example of a school self-evaluation model. Nowhere is there greater awareness of the need for human resource development through education than in Singapore, a country without natural resources which survives through the innovation, enterprise and hard work of its people. Ng (2007) describes how Singapore, one of the world's highest performing education systems, attempts to balance the need for quality assurance – through government structures and control – with the need to promote diversity and innovation which is only possible with increased decentralisation of power to its schools. The most important tool in this area is the School Excellence Model (SEM), a comprehensive quality management system implemented in 2000. The SEM is a self-evaluation model for schools, adapted from the various quality models used by business organisations. Using this model, which is aligned with the Singapore Quality

Award, schools can in fact pitch themselves against national benchmarks for organisational excellence. The SEM basically describes an excellent school in terms of nine quality criteria against which schools can be assessed (see Box 6.3).

Box 6.3 Quality criteria used in the Singapore School Excellence Model (SEM)

Leadership: How school leaders and the school's leadership system address values and focus on student learning and performance excellence; and how the school addresses its responsibilities towards society.

Strategic Planning: How the school sets clear stakeholder-focused strategic directions, develops action plans to support its directions, deploys the plans and tracks performance.

Staff Management: How the school develops and utilises the full potential of its staff to create an excellent school.

Resources: How the school manages its internal resources and its external partnerships effectively and efficiently in order to support its strategic planning and the operation of its processes.

Student-Focused Processes: How the school designs, implements, manages and improves key processes to provide a holistic education and works towards enhancing student well-being.

Administrative and Operational Results: What the school is achieving in relation to the efficiency and effectiveness of the school.

Staff Results: What the school is achieving in relation to the training and development, and morale of its staff.

Partnership and Society Results: What the school is achieving in relation to its partners and the community at large.

Key Performance Results: What the school is achieving in the holistic development of its students, in particular the extent to which the school is able to achieve the Desired Outcomes of Education.

Source: Ng (2007).

For each quality criterion, evaluation in the SEM requires *compelling evidence*. The SEM is a self-evaluation system, which serves as a mechanism for school leaders to drive school improvement. An external team from the Ministry of Education validates the self-evaluation results using the same criteria approximately once in five years. The evaluation process is explicit in requiring evidence to justify a certain score. So, even when a school is thought to perform well against a particular criterion, if there is no evidence of this, the model permits no score beyond that for *ad hoc* performance. Moreover, to score well, a school, in addition to having explicit evidence relating to a criterion, must also have evidence of continuous improvement through trend analysis. Closely associated with the SEM is the Masterplan of Awards for schools. There are four awards: Achievement Awards; Best Practice Awards, Sustained Achievement Awards and the School Excellence Award (SEA), which gives recognition to schools for excellence in education processes and outcomes. Schools may also apply for the Singapore Quality Award (SQA) just like any other industrial or commercial sector organisation. Schools may request for additional external validations, other than the once-in-five-years mandatory external validation, to qualify for these awards.

Review the role of school leaders and select, train and retrain them for that role

In Denmark, a top-down approach to educational reform is confronted by a relatively autonomous teaching force whose classrooms are sovereign. The key agents of change are not to be found in the ministry or the municipalities but in the leadership of schools. School principals are pivotal in developing an assessment and evaluation culture with an emphasis on high-quality provision and the best outcomes possible for students. This argues for a shift in the role of school principal from one who administers and manages the school and organises its staffing, students and programmes to one who is the pedagogical leader of the school. Findings from the International Successful School Principalship Project (Moos *et al.*, 2008) showed that, for example in Ontario, Canada, new public management policies had stimulated school principals to set goals for their schools drawing on both provincial tests and initiatives, as well as their own broader view of learning, setting high expectations for student achievement, while offering support and acting as role models to their staff. This new shift to a pedagogical leader included 'planning and supervising instructions that often include monitoring teachers' practice and modifying school structures, like the school day, to maximise learning' (see also Box 6.5).

The OECD *Improving School Leadership* report (Pont *et al.*, 2008) has identified four core responsibilities of school leadership based on an empirical analysis of which roles make a difference in improving school outcomes. The first two of these are directly concerned with the quality of teaching and learning and evaluation and accountability (Box 6.4).

The recent international study of school leadership in high performing systems (Barber *et al*., 2010) found a consensus on the importance of school leadership and how to improve it which recognised, among other things that:

- Leadership focused on teaching, learning, and people is critical to the current and future success of schools;
- High-performing school principals focus more on instructional leadership and the development of teachers.

Effective monitoring and internal evaluation of teaching and learning are key to undertaking these roles effectively. The need to identify 1 000 new school principals in the next five years suggests the need to identify and grow school leaders with immediate effect. Internships with the most effective school principals or the creation of a national leadership college could have a part to play in this.

Box 6.4 Leadership roles that make a difference in improving school outcomes

Supporting, evaluating and developing the expertise of teachers

Improving the quality of teaching and learning is central to school improvement, raising the academic achievement of all students and reducing the attainment gaps both within and between schools. The evidence points to the roles and tasks of school principals engaging with teachers to support, evaluate and develop them as part of the development of the school as key to what makes the most difference in improving school results. Within this role, the OECD reports four important components. Working with teachers to support, evaluate and promote their collective self-efficacy is at the heart.

- **Managing the curriculum and teaching programme**: Most countries establish a core curriculum at the national level. National policy is often further specified at regional or municipal level. It is the leader's job to implement the school curriculum within these policy boundaries in a manner that achieves the intended curriculum objectives for their specific context. School leaders generally have a measure of discretion in how they design curriculum content and sequencing, organise teaching and instructional resources and monitor quality. Giving schools a greater say in curricular decision-making allows for tailoring education and making it significant to different cultural and regional groups, and thus seems to be positively related to student performance, provided schools have the confidence and capacity to make this type of decision.
- **Teacher monitoring and evaluation**: The OECD Teaching and Learning International Survey (TALIS) showed that of 18 countries reporting on teacher monitoring and evaluation there were formal provisions for teacher evaluation in 14, although the form, rigour, content and consequences of teacher evaluation varied widely. Most of the countries indicated that teacher monitoring and evaluation are important responsibilities carried out by school leaders. Several research studies indicate that school leader involvement in classroom observation and feedback seems to be associated with better student performance.
- **Supporting teacher professional development**: School leadership also plays a vital part in promoting and participating in professional learning and development of teachers. The balance between school-based and out-of-school professional development has moved strongly in favour of school-based professional development in recent years. The OECD (2005b) noted that school-based professional development activities involving the entire staff or significant groups of teachers were becoming much more common, and teacher-initiated personal development probably less so. The most persuasive evidence of the impact of school leaders' involvement in promoting and participating in teacher learning and development is probably that of Robinson's 2008 meta-analysis of six research studies. She identified the participation of the school leader as the "leading learner" in staff development as being strongly associated with improved student outcomes.
- **Supporting collaborative work cultures**: This is an increasingly important and recognised responsibility of school leaders in several countries and involves fostering teamwork among teachers and creating environments in which student learning is the central focus. Policy makers can promote and encourage teamwork among school staff by explicitly recognising the core role of school leaders in building collaborative cultures and by disseminating and sharing best practice in this aspect.

Goal-setting, assessment and accountability

School leadership that is focused on goal-setting, assessment and evaluation can positively influence teacher and student performance. School leaders play a key role in ensuring the accountability of the school by supporting their teaching staff in aligning instruction with agreed learning goals and performance standards. Equally, schools that have systems for monitoring students' progress against their personal targets are better placed to give the individual support and intervention that may be needed if progress falters. Recent research emphasises high learning standards and strong accountability systems as key to improving student learning and achievement (Hanushek and Raymond, 2005).

Source: Pont *et al.* (2008).

Identify the change leaders and replicate their practice

During the short time of the OECD review, we identified school leaders who reflected the principles of effective instructional leadership described above, in contrast to school principals who had never observed teaching and learning taking place as a matter of routine. One of the school principals in the first category was sharing his approach with a cluster of schools in the Odense municipality and helping them to develop and improve their outcomes. He was in turn subject to robust appraisal by the education director of the municipality. It should be a priority to identify the school principals and municipal directors who exemplify good practice so as to set standards for leadership practice and disseminate their example to an expanding cadre of receptive school principals.

Ultimately, Denmark will need to decide who is accountable for the performance of individual schools. If it is the school principal or the school board, then they will need the decision-making powers to be able to choose the resources they need to do the job within the limitations of the budget. If the municipalities, then they may need to be reconfigured so that directors of education become, in effect, executive school principals for a cluster or chain of schools, each headed by a head of school.

There is considerable evidence that in other administrations, including England, Finland and Sweden, school-school partnerships, clusters and networks can provide mechanisms for sharing effective leadership as well as effective practice in a way that contributes to raising the performance of the member schools (Pont *et al*., 2008, p. 56). In England, executive leadership across partner schools has proven to be a very effective mechanism for raising the performance of underachieving schools (Hill and Matthews, 2010).

Strengthen the follow-up on school evaluation results

The school evaluation culture will not be endemic until evaluation is shared, followed up and reviewed to see what difference it has made both internally by schools and externally by Municipalities. Outcome data and evaluation results should form a core part of the municipal monitoring system and discussion and follow-up with schools for improvement. In particular, nationally comparable information, including national test results, transition statistics and student final grades in Form 9, provide comparative information across schools that can be used by municipalities most constructively to identify improvement and share best practice among schools. In light of the Government's proposal to publish results from the national tests for individual schools, municipalities and schools need to go further to ensure constructive use of these outcome data and strive to complement them with other measures. Copenhagen's annual student survey is a good example of a systematic collection of information on broader schooling outcomes to complement student academic results.

A School Council study (Mehlbye, 2010) revealed that top performing schools in Denmark had strong management and clear objectives and a strong culture of academic achievement for all students – the study included successful schools with socio-economically disadvantaged student populations. This is an example of how evaluation and outcome data can together provide the evidence and examples to challenge pre-conceived attitudes and say what works. It is critical that schools do not perceive student socio-economic disadvantage as an immutable reason for low educational attainment. Recent reports by the Office for Standards in Education in England showcase schools that refuse to accept this assumption and achieve exceptionally high results despite working in very challenging circumstances (Ofsted, 2009).

Promote and support capacity development in the external and internal evaluation of schools

As evaluation of teaching and learning and appraisal of teachers takes root, the OECD review team sees a strong case for having a centre of expertise in school evaluation at arm's length from schools and municipalities to develop evaluation frameworks and criteria, model good practice and even evaluate – through sampling – the real quality of Danish schools. EVA is well placed to undertake such a remit. Central underdeveloped and underused expertise in school and municipality evaluation can still be found within EVA. The OECD review team considers it would be prudent to nourish and refresh this expertise in order that the system has an authoritative centre for school evaluation. One useful and informative way of disseminating best practice would be for EVA to be charged with evaluating the effectiveness and capacity for evaluation of a sample of schools, one in each of a number of municipalities which is regarded by the municipality as leading the way locally in self-evaluation and teacher appraisal. Equally, the Quality and Supervision Agency should do serious analysis of the value and impact of quality reports with a view to identifying and disseminating best practice (see Chapter 7).

The seeds of an evaluation culture have been planted in Danish compulsory schools, but there is much further to go. The Ministry of Education could initiate a process with key stakeholders to draw up competency profiles for both municipal education directors and school principals – each hold influential positions in furthering the effective external and internal evaluation of schools. For example, the Ontario Ministry of Education has established a 'Leadership Framework' in collaboration with school leaders and school district supervisors (see Box 6.5). Further, school self-evaluation can be promoted by retraining school principals in school effectiveness and its evaluation, including the techniques of observing and assessing teaching and learning and giving developmental feedback. School subject supervisors should be trained as the next step, with the expectation that they will take responsibility for performance in their fields. Teacher educators should be engaged much more closely in the practice of school and classroom evaluation, and teacher education and the appraisal of teaching would benefit from the development of evidence-based standards showing minimum benchmarks for good and effective teaching (see Chapter 5).

Box 6.5 The leadership framework in Ontario, Canada

The Institute for Educational Leadership (IEL) in Ontario, Canada, represents a partnership between the Ministry of Education, school leaders and school districts in order to 'model high-calibre, tri-level, results-based strategic leadership to support school and system leaders in order to improve student outcomes'. IEL developed a research-based 'Leadership Framework' comprising practices and competencies for school principals and district supervisory officers in five major areas: setting directions; building relationships and developing people; developing the organisation; leading the instructional program; and securing accountability.

As an example, 'Leading the instructional program' includes (not exhaustively) for both school principals and school district supervisory officers:

- **Practices**: ensures a consistent and continuous school/district-wide focus on student achievement, using system and school data to monitor progress; ensures that learning is at the centre of planning and resource management; develops professional learning communities to support school improvement; provides resources in support of curriculum instruction and differentiated instruction;
- **Skills**: demonstrate the principles and practice of effective teaching and learning; access, analyse and interpret data; initiate and support an inquiry-based approach to improvement in teaching and learning;
- **Knowledge**: strategies for improving achievement; effective pedagogy and assessment; use of new and emerging technologies to support teaching and learning; school self-evaluation; strategies for developing effective teachers and leaders;
- **Attitudes**: commitment to raising standards for all students and sustaining a safe, secure and healthy school environment.

Source: *www.education-leadership-ontario.ca/content/framework.*

Chapter 7

System Evaluation

Denmark has developed national measures on outcomes, including the publication of final examination results in Forms 9 and 10. The new national tests offer the first real opportunity to reliably monitor progress in educational outcomes over time against the national Common Objectives. However, the lack of inclusion of the private sector plus a lack of clarification of how results will be used to hold schools accountable, limits their monitoring value and there should be a careful review of strategies to maximise this. Further, it is important to develop a strategy to complement existing national monitoring information with broader measures of outcomes, including stakeholder views on the quality of teaching and learning. The Quality and Supervision Agency has the mandate to monitor school providers and should identify municipalities where real progress is being made in student outcomes and share this knowledge throughout the system, plus devise an optimal system to feedback key results held at the national level to municipalities for their monitoring purposes.

This chapter looks at system evaluation within the Danish evaluation and assessment framework. System evaluation refers to approaches to monitor and evaluate the performance of the education system as a whole – although this chapter focuses on the evaluation of compulsory education according to the scope for this review. The main aims of system evaluation are to provide accountability information to the public and to improve educational processes and outcomes.

7.1 Context and features

Responsibilities for evaluation of the Danish compulsory education

Establishing a system evaluation framework

The Ministry of Education is responsible for working with the Minister to draw up any necessary laws and to ensure a clear legal framework for compulsory education. Regarding the evaluation framework, the Ministry of Education sets the legal requirements for continuous evaluation and compulsory testing, ensures the framework for supervision of private schools and defines the common basis for evaluation in compulsory education – the Common Objectives to be achieved at key stages and by the end of compulsory education. The Common Objectives were revised in 2009 to match the new objectives for the *Folkeskole*. The Ministry of Education lead these revisions, which were prepared by a series of working groups formed of researchers and teacher representatives, drawing on recommendations by several subject expert committees. There follows a consultation process with stakeholders before any amendment to the *Folkeskole* Act.

Monitoring compulsory education in Denmark

The Ministry of Education commissions studies on different aspects of compulsory education in Denmark. However, the Quality and Supervision Agency takes the lead on monitoring compulsory education and has responsibility for monitoring compulsory education providers. These responsibilities are taken over from the former School Agency which was established in 2006 with a mandate in part to monitor the municipal quality assurance systems and to directly supervise private schools.

The School Council commissions research and documents ‘what works’ as part of its mandate to follow, assess and guide the Minister of Education on the academic standard and pedagogical development in the *Folkeskole*. The School Council decides the evaluations to be undertaken by the Danish Evaluation Institute (EVA) in the area of compulsory education. It should be noted that only public schools are obliged to participate in EVA evaluations.

Providing evidence on the performance of the compulsory education system

The Quality and Supervision Agency is responsible for delivering data on compulsory education at the system level. As such, the Quality and Supervision Agency manages the implementation of international studies, national tests and the school leaving examinations in Forms 9 and 10.

The major collection, processing and presentation of education data is conducted by UNI-C (the Danish IT-Centre for Education and Research), an agency under the Danish Ministry of Education. UNI-C develops and maintains the educational databases on the Ministry of Education's website (*Databanken*) which include all major benchmarks for compulsory education (outcome data, transition to secondary education, number of students enrolled). Plus, UNI-C calculates the 'profile model' that is a statistical projection of the course of study the current youth cohort will take over the next 25 years after completing the Form 9. Schools are responsible for directly reporting their Form 9 and 10 examination results to UNI-C.

The Danish Evaluation Institute (EVA) – an independent state institution under the Ministry of Education established in 1999 – has a mandate to evaluate all levels of education and conducts research and evaluations on its own initiative. However, as of 2006, the School Council commissions official evaluations in compulsory education and these are often large-scale evaluations.

The Danish Council for Strategic Research recently gave financial support to the Centre for Strategic Educational Research to bring together researchers for targeted research on priority areas in the *Folkeskole* (Rambøll, 2011).

Major tools to measure performance in compulsory education

Participation in international student surveys

Denmark has shown heightened interest in international benchmarks of student performance over recent years. Participating in the OECD's Programme for International Student Assessment of 15-year-old students since its inception in 2000, Denmark has recently administered tests to younger students (Grade 4) by the International Association for Educational Achievement's (IEA), including the Progress in Reading Literacy Skills (PIRLS) survey and the Trends in Mathematics and Science Skills (TIMSS). Denmark also supports international comparisons on non-cognitive outcomes, including its participation in the recent IEA International Civic and Citizenship Education Study (ICCS 2009). Plus, Denmark has participated in international surveys on ICT use and the OECD's Teaching and Learning International Survey (TALIS).

Outcome measures offered by participation in international studies have been the major indicators of performance in compulsory education in Denmark. In particular, the PISA results were very much driving educational policy deliberations in the absence of national measures (Rambøll, 2011).

National tests of student performance

Compulsory national tests were successfully run for the first time in 2010. A 'national performance profile' was drawn up in December 2010 presenting for each of the 10 tests a breakdown of student performance in three distinct areas of the test, plus their overall performance on that test. For example, for the four Danish reading tests (in Forms 2, 4, 6 and 8) there are results for how Danish students performed on average in 'Language Understanding', 'Decoding', 'Text Comprehension' and an 'Overall assessment' (average performance over the three areas of the test). This 'average score' will allow comparisons

of Danish student performance on the ten tests over subsequent years[19]. In addition, results are reported in five distinct performance categories (see Box 7.1). The national performance profile is designed to show how student performance evolves over the years.

Municipalities have access to national test results for all schools in their jurisdiction and aggregated results for the municipality and can compare these to the national profile. Further, such results will be adjusted for student factors such as gender, ethnic background, parent's education and socio-economic status (Wandall, 2010).

Box 7.1 Publication of national outcome data on line

Statistics published in the 'Databank' on the Ministry of Education's website

Transition statistics for each school offering compulsory education (2004 to 2008):

- Percentage of Form 9 students who 3 months after completion go on to: Vocational education; Preparatory education; Compulsory education; Secondary education; Medium-cycle higher education
- Same for Form 10 students (usually just transition to vocational or secondary)

Exit examination results by school, municipality and nationally (2001/2 onwards):

- Number of students receiving each score on 7-point scale (no percentages/distribution);
  - 5 categories indicating student success:
    12 – Excellent; 10 – very good; 7 – good; 4 – fair; 2 – adequate;
    plus, 2 categories indicating student failure: 00 – inadequate; and -3 – unacceptable.

The trend comparison is enabled by conversion of results prior to 2007 onto the 7-point grading scale

For the most recent year, descriptive statistics on number of students taking final examinations, plus:

- By municipality and school: Average score for all students in core final examinations, by discipline
- By migrant background: Average score for all students in core final examinations, by discipline
- Number of students in each score category on the seven point scale by: core final examinations; each discipline in core final examinations; voluntary final examinations and randomly selected final examinations; and final grade

National profile of student performance in the national tests (2010 on):

- Average performance in each test (overall, plus in 3 profile areas) plus student distribution in 5 distinct performance categories based on a 100-point scale: 1 – clearly below average (10 points or less); 2 – below average (11-35 points); 3 – average (36 – 65 points); 4 – above average (66 – 90 points); and 5 – clearly above average (91 points or more).

19. Accordingly, average results for the 2010 tests are around 50 points in each area and will serve as the base year to judge student progress over subsequent years. Readers can see the national performance profile at: *www.skolestyrelsen.dk/skolen/de%20nationale%20test/national%20praestationsprofil.aspx.*

Performance on school-leaving examinations in Forms 9 and 10 and transition to further education

The average results in Forms 9 and 10 are available on the Ministry of Education's website (for both public and private schools)[20]. These include final grades awarded by teachers (*Standpunkt*), as well as results in final examinations (written and oral) in both compulsory core subjects (*bundne prøvefag*) and randomly selected subjects (*Prøvefag til udtræk*). Schools are required to submit student results on Forms 9 and 10 examinations and final grades each year to UNI-C. Results are presented in a selection of thematic statistical tables, for example showing average results by municipality or by individual schools, or for Denmark by student migrant background. Plus, a written report in pdf form is available for each year since 2006 (this is produced by UNI-C). Results are reported on a 7-point scale that follows the European Credit Transfer System (ECTS) scale developed for higher education institutions (see Box 7.1).

Transition statistics on student academic or labour market destination after completion of Form 9 are also published on the Ministry of Education's website (see Box 7.1).

Thematic evaluations of different aspects of compulsory education

Denmark increasingly makes use of special thematic evaluations or studies to bring more information at the system level. A notable example is the nation-wide research project in 2005 involving a special administration of the PISA test on a sample of 4 000 students with an overrepresentation of students with a migrant background (PISA Ethnic). The study aimed to further elucidate on factors associated with observed performance gaps in the PISA 2000 and 2003 surveys. Subsequently, Denmark also participated in the OECD Review of Migrant Education (see Nusche *et al.*, 2010). For the PISA 2009 survey, Denmark chose to oversample students with a migrant background and, therefore, was able to conduct an in-depth examination of their performance and learning profiles compared to those of native Danes based on the main survey outcomes (see AKF, 2011). 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 EVA, plus research studies conducted by EVA and other partners. A recent example is a qualitative study on factors contributing to sustained, high academic performance in schools, including schools with students from disadvantaged socio-economic backgrounds (Mehlbye, 2010). The study included 12 schools, of which 8 demonstrated sustained high grades in Form 9, including 4 with less advantaged student populations. The schools were selected by a screening of register data.

Evaluation of the implementation of national initiatives

The School Council includes in each annual report its evaluation of the implementation and possible impact of various national initiatives. This serves as the annual status report for compulsory education and draws on evidence of evaluation conducted by EVA, by the Quality and Supervision Agency and other nation-wide

20. Readers can find individual school results at: *http://statweb.uni-c.dk/Databanken/reportingservicespublish/DisplayInstList.aspx?reportID=41*; and by municipality and compulsory examination areas at: *http://statweb.uni-c.dk/databanken/uvmDataWeb/ShowReport.aspx?report=KGS-gns-kom-fag*.

research. For example, in the 2008 report it advised that more time would be needed to effectively implement the new national evaluation tools and that the Individual Student Plans were not yet significantly influencing teacher practice (Skolerådet, 2008). EVA is conducting a series of four official evaluations of the implementation of the municipal quality reports and also evaluated implementation of the individual student plans (EVA, 2008). The Quality and Supervision Agency commissions evaluations of nation-wide pilot projects, *e.g.* the School Development project in which schools receive official funds to conduct experiments in five areas in 2009/10 and 2010/11. Evaluations will include research on the effectiveness of school experiments (Rambøll, 2011).

Increased demands for system-level information from stakeholders outside the education sector

There are increased demands for information on compulsory education coming several influential stakeholders outside the education sector, including – not least of which – the Prime Minister who directly commissioned a review of the *Folkeskole* (see Box 2.1). As part of the Global Strategy for Denmark, the Danish Ministry for Economic and Business Affairs publishes an annual 'Competitiveness Report'. This presents a set of indicators for education to monitor annual progress in key educational outcomes and has heightened the attention given to system-level information needs (Danish Ministry of Economic and Business Affairs, 2009). Further, the Confederation of Danish Industry was one of six major stakeholders in the 'Our School' (*Vores Skole*) partnership launched at the school political summit in August 2009.

7.2 Strengths and challenges

Strengths

Strengthened national structure to monitor and evaluate the Folkeskole

The heightened priority given to monitoring and evaluation of compulsory education can be seen with the decision to create both the Quality and Supervision Agency (and the former School Agency) and the School Council. The Quality and Supervision Agency has the mandate to monitor, evaluate and promote quality in the Danish school system. The former School Agency – primarily through the development of national tests – considerably strengthened the ability to monitor the average outcomes of students in the *Folkeskole*. This work continued by the Quality and Supervision Agency results in the national profile that will be published each year as a good indicator of student performance in key subjects at different stages of their compulsory schooling and will allow analysis of student progress over time. Importantly, the Quality and Supervision Agency also has the mandate to monitor school providers (see below). In addition, the School Council has introduced a more systematic evaluation of the *Folkeskole* by commissioning high-quality evaluations on a large scale in different priority areas.

Legal provision to monitor school providers and to intervene when necessary

The Quality and Supervision Agency is responsible for monitoring the school providers (municipalities and private schools) and the Minister has the right to intervene if school providers are not responsive in significantly following up with school improvement plans in

schools the Quality and Supervision Agency has identified as having sustained quality concerns. For public school providers – the municipalities – such supervision is conducted 'at arm's length' via the analysis of the annual quality reports published on line by each municipality. Currently, the Quality and Supervision Agency monitors four key aspects of the quality reports: whether all required points have been addressed by municipalities; whether the reports provide enough information for municipalities to gain a solid overview of their school system and to intervene in a timely manner where necessary; whether the report includes a description of action taken by the municipalities to improve school quality, notably 'action plans' for underperforming schools; whether the report was published in time on the municipality's homepage (Danish School Agency, 2009). Plus, the Quality and Supervision Agency screens all schools on basic performance indicators each year (*e.g.* Form 9 results). If the Agency identifies schools with persistent poor performance, it can use the quality report as a basis for dialogue with the municipality on possible solutions and action plans. The quality report should provide good indication on whether/to what extent the municipality is aware of the problems identified in the given school(s). The municipalities are legally required to draw up an 'action plan' for underperforming schools. The Minister has the right to intervene if the municipal follow-up is judged inadequate (although the representatives from the former School Agency informed the OECD review team that this had never happened). For private schools the supervision can involve a visit from members of the Quality and Supervision Agency, as part of a regular thematic evaluation or in the case that there are quality concerns in that school. While there is a new possibility for private schools to elect their own Ministry-approved evaluator, members of the Quality and Supervision Agency would still visit such schools in the event there were quality concerns (see Chapter 6).

Inclusion of national outcome data for compulsory education in the monitoring system

Since 2006, the national monitoring system for compulsory education has been considerably strengthened by the inclusion of national data on student outcomes. The publication of final examination results in Forms 9 and 10 alongside teacher-awarded final grades serve as a the major indicators of overall quality in the *Folkeskole* and are bolstered by transition statistics showing student destination 3 months after completing Form 9 of the *Folkeskole*. The advantage of such data is that they cover all the public sector and the majority of private providers of compulsory education, which allows a monitoring of the situation for Denmark and informs debate on the overall productivity agenda. Despite limitations of such data for tracking trends (see below), these are the most comprehensive national indicators available for monitoring compulsory education and as such play a key role in broadening the national debate beyond results in international assessments.

The introduction of the national tests also offers monitoring information on public schools at early stages in compulsory education. The OECD review team commends the former School Agency's efforts for the development and initial validation of the national tests. The first national profile was published in December 2010. The national tests are designed to offer indicators of how performance changes over time and are conducted with varying subject intensity in Forms 2, 3, 4, 6, 7 and 8. In Danish, the national tests are conducted in Forms 2, 4, 6 and 8 and in mathematics in Forms 3 and 6. The national test design offers the potential to link items in these subjects across a common scale, thus allowing a measure of student progress across Forms (Wandall, 2010).

Serious commitment to use of evidence and evaluation to monitor compulsory education

The availability of system-level information has both sparked intense national debate on schooling and fuelled the need for more key outcome measures. Results from international assessments (PISA 2000 and PISA 2003) generated intense debate among policy makers with a major focus on 'value for money' given Denmark's comparatively 'mediocre' performance and comparatively expensive public education (Danish School Agency 2009). Denmark has looked to the OECD for external evaluation of key aspects of the education system, including the commissioned review of the *Folkeskole* in 2003, participation in OECD reviews on School Leadership and Migrant Education and the present review of Evaluation and Assessment Frameworks. System results showing large performance discrepancies between native Danes and students with a migrant background led to an in-depth statistical study of the key competencies of the school population with a migrant background (see Egelund and Tranæs, 2008). The review by EVA in 2005 on the municipal supervision of schools was a key catalyst to introducing the municipal quality reports. In general, there is a considerable strength and competency in monitoring of national initiatives undertaken by EVA, for example, the ongoing evaluations commissioned by the School Council on monitoring the impact of the municipal quality report system. Similarly, as teachers criticised the amount of work involved with drafting student plans, the government is currently conducting an experiment in 360 schools (as of September 2010) to allow teachers more freedom in writing the student plan (Rambøll, 2011). Most recently, the Prime Minister commissioned a review of the *Folkeskole* to feed into the government's reform proposal for early 2011 (see Box 2.1).

Principle of transparency at the national level

The availability of evaluation and assessment information to key stakeholders is a first step in ensuring their engagement with the results. Since 2002, it has been a requirement for schools to make performance data and any external evaluation results available to the public (usually on the school website). The government in its latest reform proposal has pledged to go further in transparency of national reporting. The OECD review team supports this principle and encourages the constructive use of comparative information for school improvement; however, as noted below, cautions on the importance of maximising the benefits and minimising the potential negative impacts with regard to the government's proposal to publish the national test results for schools, given that the original purpose and design of the national tests was as a tool to monitor national outcomes and to provide diagnostic information for teachers.

Major national outcomes results are publically available at the national level. Results for all schools on key outcome data such as school average results in Forms 9 and 10 and transition data to further education/employment are available in the Ministry of Education's *Databanken* website – results are also presented by municipality (see Box 7.1). Further, past examinations are also available in the *Evaluation portal*. An annual national performance profile is published on the Quality and Supervision Agency website for each subject and Form level tested in the national tests and currently results are made available to key stakeholders for their interest group, *e.g.* school leaders see all results for students in their school, municipal education leaders see results for all schools in their jurisdiction.

All School Council meeting minutes are provided on the School Council website with accompanying written submissions by key stakeholders where available. Equally, all School Council Annual Reports are published on its website and each report includes at the start the minutes from the meeting with stakeholders when the content of the annual report was discussed. Similarly, all EVA evaluations are published on their website.

The Competitiveness Report includes a clear set of indicators that are used to track the progress of Denmark towards its productivity goals, including in compulsory education.

Recognition of the importance of looking at broader outcomes

At the political level there is justified pride that Danish students are international leaders in civic and citizenship education as assessed by the IEA's ICCS. These are considered to be important outcomes of compulsory education. There is also awareness that parental choice is often more heavily influenced by school environment factors than by school academic outcomes (Nusche *et al*., 2010). The Competitiveness Report includes an indicator on student attitudes to collaboration (*e.g.* Danish Ministry of Economics and Business Affairs, 2009), which appears an attempt to signal the importance of looking at wider outcomes, but at the same time may indicate the limited information currently available.

Within the system, there is strong support from major stakeholders for developing measures on broader outcomes. For example, the KL partnership from 2007-2009 included a focus on student well-being and skills in creativity, innovation, problem solving and collaboration as reported by students, both at the start and end of the partnership (KL, 2009). Further, there has been a pilot large-scale parent survey conducted in five municipalities in 2010 to determine suitability as a benchmark measure of parent satisfaction across municipalities (Rambøll, 2011) and Copenhagen already runs an annual student survey on their school experiences (the 'Copenhagen Barometer').

Challenges

Under use of system-level data – in particular on outcomes

There have been considerable efforts over the past five years to provide reliable information on outcomes at the system level, notably by making Form 9 examinations compulsory and introducing national tests. While results for Form 9 and 10 final examinations are made available in the *Databanken*, these are not systematically presented in key national reports, *e.g.* the Ministry of Education's *Facts and Figures* report series. Currently, it is not possible to gain an overview of these outcomes along with new 'national profile' information available from the national tests. Further, the current presentation of results from Form 9 and 10 examinations is not accompanied by an analytical component and this simple 'benchmark' style is also mirrored in the Competitiveness Report. The tabular presentation of Form 9 results impedes an overall comparison: the user can see individual school results, results for that school's municipality, results for Denmark (but all displayed as individual tables).

The OECD review team sees more room for the Ministry of Education to consult with UNI-C when drawing up policy priorities, in particular by making more use of the Agency's statistical analytical competency. The Agency's micro-simulation model is one example of an effective collaboration to track progress toward reaching the political goal

of 95% of the youth cohort completing upper secondary education in 2015. The current analytical approach appears to be to commission *ad hoc* special thematic studies, *e.g.* in 2009 on average cost for different student groups (migrant background, bilingual, special educational needs, etc). Statistical analysis could be more proactive for example by establishing a systematic early warning system on key indicators. In general, the OECD review team had the impression that there was limited feedback to municipalities on key outcome data that are centrally available and could feed into the analysis of municipal school systems. Representatives from EVA reported to the OECD review team that their review of the implementation of municipal quality reports indicated that municipalities could greatly benefit from a centralised data provision on key performance indicators – 77% of municipalities surveyed lacked easy access to data already provided for other central databases. This cumbersome information collection was perceived to be a barrier to municipalities making use of the possibility to include additional local indicators.

Gaps in the system to monitor compulsory education in Denmark

Denmark's recent investments in complementing international evidence on outcomes in the compulsory education system with national measures of outcomes are commendable. However, there remain some important gaps in the national monitoring system.

Measures of higher-order thinking skills and cross-curricular competencies

First, it is not clear to what extent current national measures are assessing higher-order thinking skills and cross-curricular competencies. Importantly, the current final examinations offered in Forms 9 and 10 are perceived by the Danish Student Association to be 'outdated' in the skills they assess – a criticism echoed by the 'Flying Squad' in its recommendations to modernise the final examinations (see Box 2.1 and Chapter 4). This is a serious concern if final examinations serve to signal the expected outcomes of compulsory education in Denmark. Further, it would stand in contrast to the political ambition to be in the top five performers internationally in the OECD's PISA assessment – an assessment of student key competencies and their ability to apply their knowledge and skills in real life contexts. In-depth analysis of the PISA 2003 mathematics assessment showed that the most demanding questions not only required students to answer with little or no guidance (and a number of answers might be acceptable), but also required students to write an explanation of their conclusion or justify their results (OECD, 2009e).

Measures of the teaching and learning environment

Second, there is a lack of information on key stakeholders' perceptions of the teaching and learning environment. While there have been some pilots of parent surveys, the information currently available to Denmark comes from surveys to students, school leaders, teachers and parents administered during international studies. For example, there is no collection of information from students on their attitude to learning and assessment during the administration of the national tests. Researchers reported during the OECD review that analysis of results from Copenhagen's annual student survey had shown strong association between student performance and many qualitative aspects of school life, which indicates that the collection of such data nationally could be of significant policy and research interest.

Concerns on the comparability of measures of output from compulsory education

The comparability of the final grades awarded by teachers can be called into question given the reported lack of clarity of the current criteria and Common Objectives. Although national guidelines and examples are offered via the *Evaluation portal* for teachers[21], there is much room for interpretation by teachers in awarding final grades to students. It would seem prudent to evaluate to what extent the awarding of teacher grades varies across schools and municipalities. This is important given the publication of results at the national and school levels and the current use of such results to compare schools and to inform on national outcomes. There is no guarantee that final grades provide a reliable measure of school or national improvement over time.

Whilst the grading of written and oral examinations is moderated by an external censor, the final examinations serve a summative purpose and therefore are not designed to test a common set of items to allow comparison of performance over time. Indeed, representatives from the former School Agency advised the OECD review team that observed fluctuations in final examination results may not necessarily reflect real performance changes due to the change of content area assessed from year to year.

Further, national reporting of students' final grades and final examinations results by school makes no allowance for the average composition of students at the school in terms of their socio-economic background.

Establishing the validity of the national tests for monitoring purposes

The national tests were run successfully for the first time in spring 2010 and represent a significant investment from the Ministry of Education. The OECD review team identifies three major challenges to the strong potential monitoring value that the national tests should offer: misconception of what skills the tests actually measure; the lack of inclusion of the private school sector; the potential risk that results do not reflect real progress in outcomes.

Misconception of what skills the national tests measure

As yet, there has been no independent evaluation of how the national tests function and the skills set that they assess. The evaluation of the national tests conducted by the National Audit Office focused on the implementation of the testing system (Rambøll, 2011). The design of the national tests capitalises on rapid feedback to teachers of student performance in discrete areas of the national objectives. It would be important to evaluate to what extent the use of multiple choice format compromises the types of skills assessed. Well designed multiple choice questions can measure quite complex cognitive processes. For example, the PISA mathematics assessment includes some complex multiple-choice questions that require students to demonstrate a degree of sustained thought and expose the thoroughness of the students' understanding of the mathematical concepts and skills involved in solving the problem – a few of which are among the most difficult tasks in the assessment (*e.g.* OECD, 2009e). However, generally questions with a simple multiple choice format were among the easiest in the test (idem). Indeed, findings from an OECD pilot of a computer-based science assessment in Denmark, Iceland and Korea revealed the

21. Readers can access the *Evaluation portal* via the homepage of the Quality and Supervision Agency at *www.ktst.dk*.

importance of evaluating the differentiated impact of test items on different students. The computer-based assessment broadly tested students on the same science framework as for the main PISA 2006 assessment (paper and pencil tests). An evaluation of the pilot study results determined that it assessed similar areas of scientific competencies and knowledge to the main assessment and revealed no differences in overall country achievement, but did reveal some gender differences that were hard to explain. One hypothesis offered is the inclusion of multimedia stimulus involving boys and no images of girls within the computer-based assessment (OECD, 2010f).

Exclusion of the private school sector

The national tests could be a rich source of information on national outcomes at earlier stages of compulsory education to complement the Form 9 measures. However, the lack of participation of the private sector greatly limits their value for monitoring progress towards national goals.

Ensuring results reflect real progress in outcomes

At this stage, the national tests do have potential as an indicator to gauge progress from year to year in the *Folkeskole*. Student scores on the tests are automatically calculated and generated and therefore results have high scoring reliability. But the OECD review team sees a significant challenge in ensuring that the national tests provide a valid measure of student progress due to the lack of clarity over the purpose of the tests as communicated by different stakeholders during the OECD review, specifically educators' fears that results will be used to hold them directly accountable. Wandall (2010) states that the national tests were designed for both regulation and control and as a pedagogical tool and to serve both purposes the test 'has to be low stake' and that is why 'test results are made strictly confidential by law'. In this context, it will be crucial for the Ministry of Education to clarify the major purpose of the announced future publication of results from the national tests. Research from the United States has shown that if national tests are considered to be 'high stakes' for teachers and schools, teaching to the test can easily lead to an artificial over-inflation of results and thus render the results useless as a measure of real progress (*e.g.* Koretz, 2005). While the computer medium of the national tests in Denmark avoids concerns over intentional erroneous marking by teachers (a considerable advantage), there is potential risk to their value as both a monitoring tool and a pedagogical tool through teachers' under-use of the test results or their over focus on the discrete content areas that are assessed. Wandall (2010) defines 'teaching to the test' for the Danish national tests as 'too much focus on tested profile areas and too little focus on creative, innovative and oral skills (which play a significant role in the curriculum of the *Folkeskole*)'.

Furthering the Quality and Supervision Agency's role in monitoring municipalities

Whilst the OECD review team commends efforts to introduce a quality assurance system at the municipal level (see Chapter 6), there is no comprehensive overview of municipal quality evaluation systems. Currently, the Quality and Supervision Agency limits monitoring to a compliancy check on the content of the municipal quality reports, plus a focus on sustained underperformance in particular schools (as evidenced by their Form 9 and 10 results). There is room to strengthen the Quality and Supervision Agency's role here and – in particular – to introduce a focus on improvement.

Need to strengthen performance management culture in national agencies

Representatives from the Audit of the State Accounts reported to the OECD review team that the principles of performance management were not yet firmly embedded in the Ministry of Education and that it is difficult to evaluate municipalities if there is no agreement on how to measure effects/efficiency. The Audit of the State Accounts is trying to promote the need for Ministries to conduct studies on effects and outcomes. In turn, national audits are limited to checking on the correct implementation of government policies and not on their effectiveness, *e.g.* the 2009 audit on the former School Agency's implementation of the national tests.

7.3 Pointers for future policy development

Considering the much strengthened capacity for system evaluation in Denmark, the OECD review team suggests the following potential policy pointers to both capitalise on and further develop the evaluation of Danish compulsory education:

- Optimise the reporting and use of system-level data;
- Consider ways to further complement the new national monitoring system;
- Further validate and clarify the monitoring role of national tests;
- Strengthen efforts to both monitor and promote municipal evaluation capacity.

Optimise the reporting and use of system-level data

There could be attempts to more effectively communicate results from the national monitoring system to encourage their use by different stakeholders. The reporting of final grades and examination results in Forms 9 and 10 would benefit considerably from an analytical component to aid interpretation of results and, in the case of average results by schools, the addition of contextual data and adjusted measures to show the 'value added' (see Box 7.3). With the new set of data available from the national tests – and respecting the current policy of only publishing results at the national level – the value of the national tests in monitoring national progress in discrete areas could be enhanced by:

- Linking the test items across different Form levels to show progress of given cohorts at different stages of compulsory education (see Box 7.3);
- Reporting the national performance profile by gender and by student background (migrant background and socio-economic background) to allow the tracking of improvement for these key groups over time;
- Reporting a distribution of municipality and school results (without identifying particular municipalities or schools) to monitor performance variation among municipalities and schools over time.

In general, the reporting of both final examination results in Forms 9 and 10 and national test results could go further in clearly explaining exactly what each measures and how much they tell the public about compulsory education. Perie and Park (2007) identify such communication as a core responsibility within an effective accountability system (see below). For example, in Sweden, the results from national tests are published each year by the Swedish Education Agency (NAE) in an annual report (Nusche *et al.*, 2011). Each report includes content analysis of national test results for each subject by

different researchers (*e.g.* Stockholm University on mathematics, Götesburg University on English, Uppsala University on Swedish and Swedish as a Second Language). Thus, offering readers a heightened understanding of what the results actually mean and keeping an active link with the research community.

Of critical importance, the Quality and Supervision Agency in collaboration with KL should devise an optimal feedback system of key results held at the national level to municipalities for their monitoring purposes. Such an exercise should aim to improve the current system of feedback of national tests results to municipalities so as to minimise the repetition of basic statistical and reporting tasks at the municipal level.

Consider ways to further complement the new national monitoring system

Broadening national measures on student outcomes

Denmark has recently invested in a computer-based adaptive testing system and this has significantly strengthened the availability of information on outcomes of students in compulsory education to many stakeholders throughout the system. Consideration should be given to further developing the national tests by introducing performance type tasks (see Chapter 4). The aim would be to have national measures of student higher-order thinking skills to monitor progress in stimulating more students to excellence. In the longer term, Denmark may wish to consider introducing a light monitoring sample survey – such surveys can provide stable trend information and monitor a broader range of student knowledge and skills compared to a full cohort test – to supplement the national monitoring with information on broader student outcomes. For example, in Finland a survey is used to monitor students' 'learning-to-learn' skills (see Chapter 4). Some systems only use monitoring surveys to inform system monitoring needs and do not make use of full-cohort student tests, but ensure that these cover a wide range of the national curricula (*e.g.* New Zealand and the Flemish Community of Belgium). In Australia, there is a suite of national assessments comprising both full cohort student tests in numeracy and literacy, and cyclical sample surveys to monitor student outcomes in science, ICT, civics and citizenship (Santiago *et al*., 2011). The sample surveys draw on a statistically representative sample of students at target form levels (equivalent to about 5% of the corresponding population). Each area surveyed represents an agreed national priority and is tested once every three years. The first survey was run in 2003 for science, in 2004 for civics and citizenship and in 2005 for ICT. Each assessment results in a national report showing student average performance and proportion of students at the set 'proficient standard' for each state and territory, each school sector (*e.g.* government and non-government) and for selected student subgroups (*e.g.* by Indigenous and socio-economic background) and allows a reporting of progress over time, as each subject is assessed every three years (see for example MCEECDYA, 2010). Australia also capitalises on complementary information from international assessments by only administering the science survey in Form 6 (using PISA science results to inform progress in Form 10). For both ICT and civics and citizenship students are assessed in Forms 6 and 10.

The Ministry of Education should take stock of existing efforts in municipalities to develop measures of creativity, problem solving, collaboration and innovation (KL, 2009) and evaluate to what extent these could be supported and extended throughout the system. Indeed, there is strong support from key stakeholders to examine how to best clarify

creativity and innovation as goals in the Common Objectives and how to best evaluate and test these competencies.[22]

Developing national measures on teaching and learning quality

Denmark has recently piloted a parent survey which will be evaluated and considered as a potential national monitoring tool. At the heart of the compulsory education system are the students. Their perspective and opinions can be incredibly enlightening in forming policies for school improvement. They could offer insightful feedback on the development of the evaluation culture, for example, by reporting on the use of evaluation at their schools, their opportunity to give feedback to teachers and school leaders on their learning and educational priorities, their regular assessment activities and their perspective on the usefulness of these. Copenhagen's experience with its annual survey of students in Forms 4 to 9 shows both high response rates (in 2010 this was 76% – only students who full completed the survey were included) and useful analytical information on broader schooling outcomes (Københavns Kommune, 2010).[23] Norway introduced a student survey in 2005 and this forms a key part of the national reporting on the education system. In the annual summative report on education in Norway (*The Education Mirror*) there is always a clear presentation and analysis of results from the survey and these feed into the national policy debate (Nusche *et al*., forthcoming). This is one way to ensure the systematic inclusion of student perceptions at the political level. The Quality and Supervision Agency could also give consideration to the collection of some student feedback on key issues during the administration of the national tests. Certainly, the collection of information from students during the administration of international surveys has led to informed analysis of how different reported factors relate to student performance, *e.g.* classroom climate factors such as discipline and student-teacher relations have shown strong correlation with student achievement (*e.g.* OECD, 2004b). Results from the KL partnership study showed that during the period of increased focus on learning outcomes students remained happy and confident and in fact the proportion reporting this had increased by the end of the study (KL, 2009). Further, KL identifies the need to build on new measures such as membership, community, happiness and wellbeing.

Further validate and clarify the monitoring role of the national tests

The OECD review team strongly advocates a careful review of strategies to maximise the monitoring potential of the national tests at the system level without compromising their reliability as a monitoring tool (*i.e.* avoiding the artificial inflation of test scores that do not reflect real improvement) and their use as a pedagogical tool (see Chapter 4). The OECD review team believes that the current government proposal to publish national test results at the school level is premature. The priorities would be to continue to validate the

22. This is included in the joint policy paper by the Confederation of Danish Industry, Danish Teachers Union, Danish School Leaders Union, Local Government Denmark, Danish Students Association and the Parents and Society Association, as part of the 'Vores Skole' project.

23. The 2010 survey include 53 questions on students' experience in school regarding security, welfare, health, democratic education, happiness, motivation to learn, recreation and habits. Response rates among Copenhagen schools varied from 52% to 97% (Københavns Kommune, 2010).

national tests (see Chapter 4) and to go further in supporting and promoting capacity building to ensure the effective use of national test results by key stakeholders: by teachers as diagnostic tools to assess individual student, student group and class progress and to monitor the impact of different instructional interventions; by municipal education directors and school leaders as a key part of their own quality monitoring systems. Rosenkvist (2010) conducted a detailed review of different uses of student test results in OECD countries and highlights that to bring about positive effects of national student tests 'necessitates that schools and teachers have the capacity to interpret and use student test results' (see also Box 7.2).

It is critical that the Ministry of Education clarifies the purpose of the proposed publication of national test results for schools and how this fits into an accountability system (see Box 7.2). Accountability systems should enable valid decisions that 'reflect accurate evaluation of what was intended to be measured' and 'justification of the interpretations and uses (especially consequences formally specified as part of the accountability system)' (Perie and Park, 2007). The national tests were originally conceived for dual purposes: to provide a powerful pedagogical tool to teachers against testable areas of the national Common Objectives; to monitor national progress over time via a 'national performance profile' and to allow municipalities to monitor their school results against this. To satisfy both purposes, the government strategy at the time was to keep the results confidential and for internal management and improvement purposes – with the exception of the publication of a national performance profile. Denmark would strongly benefit from stable and robust national measures of student outcomes that would allow the monitoring of changes over time. The national tests represent a significant investment and do offer the possibility to track overall progress – at this stage at least in the public schools – on national measures to complement evidence from international studies, and also importantly, at different stages throughout compulsory education.

In particular, the Ministry of Education will need to clarify and clearly communicate to all stakeholders the use of national test results for:

- *Monitoring improvement*: With confidential results, municipalities and schools themselves can use the results for monitoring their outcomes and promoting improvement – the challenge here would be in developing adequate capacity at these levels to effectively use these results to this end. If the intention is to monitor municipal and school improvement, it would be imperative to present results showing changes from year to year and in such a way as to allow a fair comparison among schools and municipalities (see Box 7.3).
- *Holding school providers accountable*: The publication of results usually aims to introduce an external accountability to schools and education providers. However, if this is the aim, then the OECD review team is unsure why private schools are allowed to opt out of the national tests. In light of the significant public funding to private schools, both public and private schools should be held accountable in the same way – especially given the increased number of private schools offering compulsory education. This argument is even stronger, if the publication of test results aims to inform parental choice of schools.

Box 7.2 National tests: design, purpose and use of results for accountability

Most OECD countries use student test results for accountability and improvement, but contexts and testing traditions vary considerably. For example, Australia recently designed and introduced national tests with the clear purpose to test basic skills in core areas that all Australian students should acquire and the publication of results was to hold all Australian schools accountable (Australian Government Department of Education, Employment and Workplace Relations, 2011). This is in the context of a culture where States and Territories had offered for many years standardised testing systems and many school districts and schools had already invested in analytical information systems and related training programmes to support educators' use of test results (Santiago *et al.*, 2011). Countries that do not have a well-developed tradition for using student test results for improving instruction may need to enforce and support this practice with some measures of accountability (Rosenkvist, 2010). In introducing a system of accountability, it is essential to have a clear understanding of what student tests can (and cannot) be used for: 'teachers and schools should only be accountable for factors that they can influence. This is important for the fairness and legitimacy of the accountability system' (Rosenkvist, 2010). Perie and Park (2007) conducted a review of accountability systems and related literature in the United States and caution that a well designed and effective accountability system pays attention to seven core components:

- The reason for the accountability system and its intended goals (expected outcomes);
- Performance indicators used are valid and interpreted correctly and should be as many as possible and not just one measure;
- Design the system to match the intended goals (*e.g.* whether to use status, improvement or growth measures);
- Consequences of the results regarding possible sanctions and rewards and monitoring these for effectiveness;
- Communication about the accountability system and its results and their limitations to schools, school providers and the general public;
- Support from the State to schools for improvement and evaluating whether the accountability system supports high-quality instruction;
- Regular evaluation, monitoring and improvement of the system.

Source: Rosenkvist (2010); Perie and Park (2007); Santiago *et al.* (2011).

Sweden – like Denmark – is a country where comparatively small performance differences are observed between schools in the PISA performance results. However, between-school variation in the Swedish PISA results did increase significantly between 2000 and 2009 and is now higher than in the other Nordic countries (OECD, 2010d). In Sweden, results of national tests are published by municipality (Nusche *et al.*, 2011). However, in the national reports the major focus is on the national level and by subgroups of key analytical interest (gender and immigrant background). Descriptive results are presented at the municipal level in each of the Swedish Education Agency's (NAE) three major annual reports using nine municipal groupings established by the Swedish Umbrella organisation for municipalities (SALAR). At the same time, SALAR also publishes its own league tables of municipal results. There is transparent reporting of student results at the school level in both national tests and final school grades in the NAE's online databases SIRIS (observed school averages) and SALSA (school results adjusted with a proxy value added measure). However, the NAE reports that the publication of these results 'has attracted very little attention and there has been relatively little public debate on the question' (NAE, 2005b). However, in the event of reporting student results at the school level, it is usually considered better practice to also adjust results for the particular school population (see Box 7.3).

Box 7.3 The proposed publication of national test results for schools: some reporting considerations

If Denmark plans to publish the national test results by municipality and school for accountability purposes, it should examine various approaches to reporting used in other countries that try to maximise the fairness in school comparisons. Compared to other countries, Denmark has the major performance differences within schools and results from national test pilots confirm the huge performance differences among students in each Form (*e.g.* OECD 2010c; Wandall, 2010). Differentiating instruction within classes and schools and ensuring adequate progress of individual students is, therefore, rightly identified as the major challenge in the *Folkeskole*. However, there are still some performance differences observed between schools (*e.g.* OECD, 2010d) and in attempting to draw conclusions on the extent to which these reflect differences in the effectiveness of teaching and school policies, it is important to consider characteristics of the student population.

Provide complete descriptive statistics on test participation

For each school there should be clear information on the number of students who did not complete the test and reasons for non-participation, key characteristics of the school population (*e.g.*, parental educational background/employment, proportion of students speaking Danish as a second language, proportion of students with identified special educational needs). For example, such information is provided in reporting systems in Australia (*My School* website) and England (*RAISEonline*).

Focus reporting on progress

The reporting of results should capitalise on the ability of national tests to show changes over time. Denmark should consider ways to present school results with a focus on school-level gains or losses on the existing suite of national tests. The items in the national tests could be linked across Forms in different content areas to show student progress in a given measure across Forms within the school – currently for Danish and mathematics and for other subjects if further tests are developed. This could be reported against the national average progress of students in each content area across different Forms. This would have the advantage also of promoting educator take up of the possibility to re-administer the national tests a maximum of two more times for each student. In Australia (see Santiago *et al.*, 2011), the National Assessment Plan – Literacy and Numeracy (NAPLAN) tests include items linked on a common scale to allow documentation of student progression in each of the core areas (reading, writing, language conventions [spelling, grammar and punctuation]) across the four key educational stages that each student sits the test (Years 3, 5, 7 and 9). In this way, it is possible to gauge student progress in the national tests on a subsequent year, for example, it will be possible to see how well a student performs on the common NAPLAN reading scale at four different stages of his or her schooling (in Years 3, 5, 7 and 9). Results from 2010 on will be aggregated to show progress at the State and Territory and national levels.

Consider the progress achieved by a school for its particular student population

In England, schools are expected to meet targets for student expected progress between specified key stages of schooling (see Rosenkvist, 2010). Such progress measures are complemented by a statistical indicator of 'Contextual Value Added (CVA) score'. Such scores show the progress made by students from the end of a key stage to the end of another key stage using their test results. CVA takes into account the varying starting points of each students' test results, and also adjusts for factors which are outside a school's control (such as gender, mobility and levels of deprivation) that have been observed to impact on student results. Several systems in the United States also attempt to measure 'adequate yearly growth'. Various models have been researched and used in practice. In value-added models, students' actual test scores are often compared to the projected scores, and classroom and school scores that exceed the projected values are considered as positive evidence of instructional effectiveness. In this way, value-added models can be used to identify teachers and schools that have met above expected growth despite various challenging circumstances. It is important to note that value-added models are still under development, and therefore they are prone to error (Koretz, 2008).

Strengthen efforts to both monitor and promote municipal evaluation capacity

Denmark has made considerable progress in establishing a quality monitoring system: municipalities draw up quality reports based on information submitted to them by schools; the Quality and Supervision Agency monitors these and major indicators of school performance and checks and evaluates whether municipalities follow up adequately schools where there are quality concerns. While it is important that the Quality and Supervision Agency in its monitoring capacity continues to ensure a minimum quality and conduct a basic risk assessment of all schools, it is also of key importance to identify municipalities where real progress is being made in student outcomes. The Quality and Supervision Agency should be in a position to identify municipalities that are producing and sustaining improved student performance and to be able to learn from these examples and share this knowledge throughout the system. In subsequent years, one helpful indicator will be student progress as measured in the national tests and it will be important for the Quality and Supervision Agency to invest in efficient systems to report and analyse this to feed results into their monitoring of municipalities. As identified above, it would be useful to complement performance information with data on the teaching and learning environment.

Given the pivotal role that municipalities play in validating curriculum against the Common Objectives and the basis that such objectives form for the evaluation culture in Denmark, it would be of significant interest for the Quality and Supervision Agency to explore ways to evaluate the adequacy and effectiveness of such municipal curriculum plans and follow up. Especially in the light of the OECD review team and the 'Flying Squad' recommendations (see Box 2.1) to further clarify the national Common Objectives. There may be room to draw on both EVA's capacity, the content expertise of educators and KL's partnership experience.

Similarly, the Quality and Supervision Agency could work with KL to build municipal monitoring capacity and effective use of national test results and other performance indicators. Results from the School Council's study of top performing schools revealed the importance of clearly formulated objectives and performance management at the municipal level with strong school leadership (Mehlbye, 2010): school goals are formulated in quality reports at the municipal and school levels and the municipal officers conduct close and continuous dialogue with the schools on their work. Great progress has already been made around the implementation of quality reports in engaging municipal officials in information meetings at the former School Agency and in sharing municipal experiences with establishing new quality systems on the *Evaluation portal*. The KL partnership revealed positive effects of horizontal collaboration and knowledge share at the political levels with respect to evaluation issues and in general many participants felt like they were 'part of something bigger' which gave both leverage and motivation to go further with their monitoring and evaluation systems. The Quality and Supervision Agency and KL could design ways to further stimulate such collaborations. The KL partnership (KL, 2009) made use of a 'status analysis' tool – a questionnaire administered to school principals, teachers, parents and students at both the start and end of the partnership, including concrete measures of reading progress and stakeholder reports on the use of targets, goals and related discussions – and identified the following effects: put greater focus and follow up on results – both easy and hard-to-measure results; made municipal quality reports operational; strengthened quality development; and provided profiles of schools that were not so well known on existing management areas.

Australia presents an example of the effective use of national monitoring results by school providers to evaluate and manage their school system performance (Santiago *et al.*, 2011). There is both a clear focus on national goals and monitoring of progress towards achieving these and a focus on locally relevant priorities and the monitoring of these – often including broader information collected locally. All State and Territory government departments – the equivalent role to municipalities in Denmark as school providers – produce an annual report on major activities, including both financial and performance information. In performance reporting, the major focus is on performance outcomes for the government school sector, although the reports also usually include minimal reporting on the non-government school sectors (*e.g.* enrolment figures, new schools registered, proportion of schools meeting agreed requirements). A common feature in the 2009/10 government reports is the prominence of data from the new national literacy and numeracy tests in the performance monitoring. The exact format for reporting of national test results varies according to the emphasis on different monitoring goals for each of the providers and demonstrates the way that the same data results can be used to monitor different local level goals.

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Annex 1: Visit Itinerary

(5-12 October 2010)

Tuesday 5 October

09.00-10.45	Ministry of Education
11.00-12.00	The Danish School Agency
12.00-13.00	UNI-C
13.00-14.00	Working lunch with Rambøll – authors of the Country Background Report
14.00-15.00	Group of teacher educators
15.00-16.00	School and Parents Association
16.15-17.15	Municipal children and culture authority – Herlev

Wednesday 6 October

09.00-09.30	Ministry of Economic and Business Affairs – the 'Competitiveness Report'
09.30-10.00	Audit of State Accounts
10.00-11.00	The Danish Evaluation Institute (EVA)
11.00-12.00	Private Schools Organisations
12.00-13.00	The Confederation of Danish Employers
14.00-16.30	School visit 1 – Bordings Friskole
17.50-21.00	*Travel to Hedensted*

Thursday 7 October

08.30-09.30	Municipal educational authority – Hedensted
10.00-12.30	School visit 2 – Stjernevejskolen
13.00-16.00	School visit 3 – Stoubyskole
16.43-18.00	*Travel to Odense*

Friday 8 October

08.30-11.00	School visit 4 – Sct. Hans Skole
11.30-12.30	Municipal educational authority – Odense
13.07-15.00	*Travel to Copenhagen*
15.15-16.00	The Association of Danish Students

Monday 11 October

09.00-09.45	Minister of Education
10.30-13.00	School visit 5 – Skovvangsskolen in Glostrup
13.30-16.00	School visit 6 – Katrinedals Skole in Vanløse
16.30-17.30	Municipal educational authority – Copenhagen

Tuesday 12 October

09.00-09.45	The Danish Association of School Leaders
09.45-10.45	Local Government Denmark
11.00-12.00	The Danish Union of Teachers
12.00-14.00	Research seminar
14.00-15.00	The Chairmanship of the Council for Evaluation and Quality Development of Primary and Lower Secondary Education
15.00-16.00	Representatives from the "360 degrees review of the *Folkeskole*" 'Flying Squad'
16.00-17.00	Final meeting (Ministry of Education and the Danish School Agency)

Preliminary Visit undertaken by the OECD Secretariat (18-19 August 2010)

Wednesday 18 August

09.00-09.45	Working Party preparing the OECD review
10.00-11.15	Danish Evaluation Institute (EVA)
11.45-13.00	Rambøll – Country Background Report authors
14.00-15.00	Local Government Denmark
15.15-16.30	Chairmanship of the Council for Evaluation and Quality Development of Primary and Lower Secondary Education

Thursday 19 August

09.00-10.00	The Danish Association of School Leaders
10.30-11.30	The Danish Union of Teachers
12.00-13.00	The National Parent Association and the Danish Student Association
14.00-15.00	Ministry of Education and the Danish School Agency
15.30-17.00	Working Party preparing the OECD review

Annex 2: Composition of the OECD Review Team

Eunice Jang, a Korean national, is an Associate Professor at the Department of Curriculum, Teaching and Learning in the Ontario Institute for Studies in Education, University of Toronto. Her research interests lie at the intersection between educational assessment and educational and social program evaluation. Her research seeks to advance practices through alternative assessment approaches that promote students' self-regulated learning while informing instructional planning. She has collaborated with various stakeholders on a large-scale study that examined multidimensional factors influencing school improvement despite challenging circumstances. She currently leads a longitudinal evaluation study that examines the feasibility of a new performance-based classroom assessment system developed by the Ontario Ministry of Education and teachers. She also examines the role of community support workers in inner-city schools. She has served on the Advisory Board of the Education Quality and Accountability Office (EQAO) provincial literacy and numeracy assessments as well as the International Language Testing Association Nominating Committee and the American Educational Research Association (AERA) Significant Research Contribution Award Committee.

Peter Matthews, a British national, is an Education Consultant and Visiting Professorial Fellow at the Institute of Education, University of London. His research interests include school and system leadership, evaluation and improvement. He specialises in the evaluation of national policies for schools and works mainly for governments or national organisations in the UK and internationally. In England, he is adviser to the National College of School Leadership on the appointment and effectiveness of National Leaders of Education, and is contributing to the revision of the national professional qualification for headteachers. He is also a consultant to the Office for Standards in Education (Ofsted), leading work on schools in challenging circumstances. Peter was previously a senior civil servant, Her Majesty's Inspector and Head of School Inspections in Ofsted from 1993 to 2003 where he led the development and operation of the school inspection system in England from its inception. He has also been a Chief Adviser and deputy chief officer in local government and is Past President of the National Association of Educational Inspectors, Advisers and Consultants and the Society of Chief Inspectors and Advisers. He has chaired national committees ranging from the introduction of autonomous schools to science education, and has worked in schools and teacher education. His publications include research in both science and education. In 2003, he received a State honour for his contribution to education.

Paulo Santiago, a Portuguese national, is a Senior Analyst in the OECD Directorate for Education, where he has been since 2000. He is currently the co-ordinator of the OECD Review on Evaluation and Assessment Frameworks for Improving School Outcomes. He has previously assumed responsibility for two major cross-country reviews, each with the participation of over twenty countries: a review of teacher policy (between 2002 and 2005, leading to the OECD publication "Teachers Matter") and the thematic review of tertiary education (between 2005 and 2008, leading to the OECD publication "Tertiary Education for the Knowledge Society"). He has also led reviews of teacher policy and tertiary education policy in several countries. He holds a PhD in Economics from Northwestern University, United States, where he also lectured. With a background in the economics of education, he specialises in education policy analysis.

Claire Shewbridge, a British national, is an Analyst in the OECD Directorate for Education and is currently working for the OECD Review on Evaluation and Assessment Frameworks for Improving School Outcomes. She most recently worked on the OECD Review on Migrant Education working on country-specific analysis for the Netherlands, Austria and Norway and co-authored the OECD report "Closing the Gap for Immigrant Students" (2010). For five years, Claire co-ordinated the PISA thematic report series. She also led analysis of student attitudes towards science learning and the environment in the PISA 2006 survey. Her earlier statistical work with the OECD included educational enrolment, graduation and financial statistics published in Education at a Glance, labour force survey statistics published in the OECD Employment Outlook and financial statistics in the OECD's Development Assistance Committee. She co-ordinated the review of Denmark and acted as Rapporteur for the OECD review team.

Annex 3: Comparative Indicators on Evaluation and Assessment

	Denmark	Country Average[1]	Denmark's Rank[2]
EDUCATIONAL ATTAINMENT Source: Education at a Glance (OECD, 2010a)[3]			
% of population that has attained at least upper secondary education, by age group (excluding ISCED 3C short programmes)[4] (2008)			
Ages 25-64	75	71	14/30
Ages 25-34	85	80	=13/30
Ages 35-44	80	75	14/30
Ages 45-54	69	68	15/30
Ages 55-64	63	58	=13/30
% of population that has attained tertiary education, by age group (2008)			
Ages 25-64	34	28	=9/31
Ages 25-34	43	35	7/31
Ages 35-44	37	29	=7/31
Ages 45-54	32	25	=7/31
Ages 55-64	26	20	=11/31
Upper secondary graduation rates (2008)			
% of upper secondary graduates (first-time graduation) to the population at the typical age of graduation	83	80	=13/26
STUDENT PERFORMANCE			
Mean performance in PISA (Programme for International Student Assessment) (15-year-olds) (2006) Source: PISA 2009 Results (OECD, 2010d)[3]			
Reading literacy	495	493	19/34
Mathematics literacy	503	496	13/34
Science literacy	499	501	20/34
SCHOOL SYSTEM EXPENDITURE Source: Education at a Glance (OECD, 2010a)[3]			
Expenditure on primary, secondary and post-secondary non-tertiary institutions as a % of GDP, from public and private sources			
1995	4.0	~	=7/26
2000	4.1	~	=6/29
2007	4.3	3.6	2/29
Public expenditure on primary, secondary and post-secondary non-tertiary education as a % of total public expenditure (2008)[5]	9.2	9.0	11/29
Total expenditure on primary, secondary and post-secondary non-tertiary education from public sources (2007) (%)	98.1	90.3	5/25
Annual expenditure per student by educational institutions, (2007) (US$)[6]			
Primary	9176	6741	6/28
Lower secondary	8998	7598	12/26
Upper secondary	10342	8746	8/26
All secondary	9675	8267	7/28
Change in expenditure per student by educational institutions, primary, secondary and post-secondary non-tertiary education, index of change between 1995, 2000 and 2007 (2000 = 100)			
1995	87	88	=11/22
2007	111	125	19/27
Current expenditure – composition, primary, secondary and post-secondary non-tertiary education (2007)[7]			
Compensation of teachers	53.6	63.8	16/20
Compensation of other staff	27.0	14.9	1/20
Compensation of all staff	80.5	79.2	=14/28
Other current expenditure	19.5	20.8	=13/28

	Denmark	Country Average[1]	Denmark's Rank[2]
SCHOOL STAFF NUMBERS			
Ratio of students to teaching staff (2008) Source: Education at a Glance (OECD, 2010a)[3, 8]			
Primary	m	16.4	m
Lower Secondary	10.1	13.7	=18/24
Upper Secondary	m	13.5	m
All Secondary	m	13.7	m
CHARACTERISTICS OF THE TEACHER WORKFORCE (lower secondary education, 2007-08) Source: TALIS (OECD, 2009b)[9]			
Age distribution of teachers			
Teachers aged under 25 years	0.9	3.0	16/23
Teachers aged 25-29 years	7.3	12.1	18/23
Teachers aged 30-39 years	30.0	28.0	8/23
Teachers aged 40-49 years	23.3	29.6	18/23
Teachers aged 50-59 years	30.8	23.5	4/23
Teachers aged 60 years and more	7.8	3.9	4/23
Gender distribution of teachers (% of females)	58.1	69.3	20/23
Teachers' educational attainment			
% of teachers who completed an ISCED 5A qualification or higher[4]	97.9	83.7	6/23
Employment status of teachers			
% of teachers permanently employed	96.6	84.5	2/23
TEACHER SALARIES in public institutions, Source: Education at a Glance (OECD, 2010a)[3]			
Annual teacher salaries (2008)[6]			
Primary – starting salary (US$)	37449	28949	4/29
Primary – 15 years experience (US$)	42308	39426	13/29
Primary – top of scale (US$)	42308	48022	19/29
Primary – ratio of salary after 15 years experience to GDP per capita	1.16	1.16	14/29
Lower secondary – starting salary (US$)	37449	30750	5/29
Lower secondary – 15 years experience (US$)	42308	41927	13/29
Lower secondary – top of scale (US$)	42308	50649	19/29
Lower secondary – ratio of salary after 15 years experience to GDP per capita	1.16	1.22	16/29
Upper secondary – starting salary (US$)	39085	32563	5/28
Upper secondary – 15 years experience (US$)	51034	45850	8/28
Upper secondary – top of scale (US$)	51034	54717	15/28
Upper secondary – ratio of salary after 15 years experience to GDP per capita	1.40	1.29	11/28
Number of years from starting to top salary (lower secondary education) (2008)	8	24	=25/27
Decisions on payments for teachers in public schools (2008)[10]			
Criteria for base salary and additional payments awarded to teachers in public institutions			
● Base salary/■ Additional yearly payment /Δ Additional incidental payment			
Years of experience as a teacher	●■ Δ	●29 ■9 Δ8	
Management responsibilities in addition to teaching duties	●■ Δ	●12 ■18 Δ7	
Teaching more classes or hours than required by full-time contract	■ Δ	●2 ■10 Δ17	
Special tasks (career guidance or counselling)	■ Δ	●4 ■13 Δ11	
Teaching in a disadvantaged, remote or high cost area (location allowance)	●■ Δ	●9 ■18 Δ4	
Special activities (*e.g.* sports and drama clubs, homework clubs, summer schools etc.)	■ Δ	●1 ■8 Δ12	
Teaching students with special educational needs (in regular schools)	■ Δ	●9 ■11 Δ5	
Teaching courses in a particular field	■ Δ	●5 ■8 Δ4	
Holding an initial educational qualification higher than the minimum qualification required to enter the teaching profession	●■ Δ	●18 ■9 Δ5	
Holding a higher than minimum level of teacher certification or training obtained during professional life	●■ Δ	●15 ■11 Δ3	
Outstanding performance in teaching	■ Δ	●5 ■9 Δ8	
Successful completion of professional development activities	■ Δ	●10 ■7 Δ4	
Reaching high scores in the qualification examination	-	●4 ■3 Δ3	
Holding an educational qualification in multiple subjects	●■ Δ	●3 ■4 Δ3	
Family status (married, number of children)	-	●2 ■8 Δ1	
Age (independent of years of teaching experience)	-	●4 ■3 Δ1	
Other	-	●1 ■8 Δ2	

	Denmark	Country Average[1]	Denmark's Rank[2]
TEACHER PROFESSIONAL DEVELOPMENT (lower secondary education) Source: TALIS (OECD, 2009b)[9]			
Teacher participation in professional development (2007-08)			
% of teachers who undertook some prof. development in the previous 18 months	75.6	88.5	21/23
Average days of professional development across all teachers	9.8	15.3	16/23
Average days of professional development among those who received some	12.9	17.3	13/23
Average % of professional development days taken that were compulsory	34.6	51.0	21/23
Types of professional development undertaken by teachers (2007-08)			
Courses and workshops	81.2	81.2	14/23
Education conferences and seminars	41.6	48.9	16/23
Qualification programmes	15.4	24.5	19/23
Observation visits to other schools	10.4	27.6	20/23
Professional development network	43.5	40.0	8/23
Individual and collaborative research	52.3	35.4	4/23
Mentoring and peer observation	17.5	34.9	21/23
Reading professional literature	77.3	77.7	14/23
Informal dialogue to improve teaching	90.4	92.6	19/23
Impact of different types of professional development undertaken by teachers (2007-08)			
% of teachers reporting that the professional development undertaken had a moderate or high impact upon their development as a teacher			
Courses and workshops	86.0	80.6	=5/23
Education conferences and seminars	82.9	73.9	3/23
Qualification programmes	96.8	87.2	1/23
Observation visits to other schools	83.6	74.9	4/23
Professional development network	88.1	80.2	5/23
Individual and collaborative research	94.6	89.3	3/23
Mentoring and peer observation	78.7	77.6	9/23
Reading professional literature	84.9	82.8	11/23
Informal dialogue to improve teaching	92.8	86.7	=3/23
Teachers' high professional development needs (2007-08)			
% of teachers indicating they have a 'high level of need' for professional development in the following areas			
Content and performance standards	17.1	16.0	8/23
Student assessment practices	13.6	15.7	12/23
Classroom management	2.3	13.3	23/23
Subject field	4.6	17.0	22/23
Instructional practices	4.7	17.1	21/23
ICT teaching skills	20.1	24.7	17/23
Teaching special learning needs students	24.6	31.3	18/23
Student discipline and behaviour problems	9.8	21.4	22/23
School management and administration	3.9	9.7	21/23
Teaching in a multicultural setting	7.1	13.9	19/23
Student counselling	5.5	16.7	23/23
TEACHER PERCEPTION OF SELF-EFFICACY (lower secondary education) Source: TALIS (OECD, 2009b)[9]			
% of teachers who 'strongly agree' or 'agree' with the statement "Teachers feel that they are making a significant educational difference" (2007-08)	96.6	92.3	8/23
% of teachers who 'strongly agree' or 'agree' with the statement "Teachers feel that when they try really hard, they can make progress with even the most difficult and unmotivated students" (2007-08)	74.8	82.7	=19/23
SYSTEM EVALUATION			
Examination regulations, public schools only (2008)[11]			
Primary education (Yes/No)			
A standard curriculum or partially standardised curriculum is required	Yes	27/29	
Mandatory national examination is required[12]	Yes	4/29	
Mandatory national assessment is required[13]	Yes	19/29	
Lower secondary education (Yes/No)			
A standard curriculum or partially standardised curriculum is required	Yes	27/29	
Mandatory national examination is required	Yes	10/28	
Mandatory national assessment is required	Yes	18/29	

	Denmark	Country Average[1]	Denmark's Rank[2]
Potential subjects of assessment at national examinations[12] (lower secondary education) (2006) Source: Education at a Glance (OECD, 2008)[3, 11]			
National examinations exist (Yes/No)	Yes	8/25	
Mathematics	Yes	9/9	
Science	Yes	7/9	
National language or language of instruction	Yes	9/9	
Other subjects	Yes	8/9	
Compulsory for schools to administer national examinations (Yes/No)	Yes	7/9	
Year/Grade of national examination	9	9.2	
Potential subjects of assessment at national periodical assessments[13] (lower secondary education) (2006) Source: Education at a Glance (OECD, 2008)[3, 11]			
National periodical assessments (Yes/No)	No	14/25	
Mathematics	a	12/13	
Science	a	5/13	
National language or language of instruction	a	12/13	
Other subjects	a	6/12	
Compulsory for school to administer national assessment (Yes/No)	a	10/13	
Year/Grade of national assessment	a		
Possible influence of national examinations (lower secondary education) (2006) Source: Education at a Glance (OECD, 2008)[3] None/Low/Moderate/High[14]			
Performance feedback to the school	m	None:2 Low:1 Moderate:1 High:3	
Performance appraisal of the school management	m	None:4 Low:1 Moderate:1 High:1	
Performance appraisal of individual teachers	m	None:4 Low:2 Moderate:0 H igh:1	
The school budget	m	None:7 Low:1 Moderate:0 High:0	
The provision of another financial reward or sanction	m	None:7 Low:1 Moderate:0 High:0	
The assistance provided to teachers to improve their teaching skills	m	None:3 Low:0 Moderate:3 High:0	
Remuneration and bonuses received by teachers	m	None:7 Low:0 Moderate:0 High:0	
Likelihood of school closure	m	None:7 Low:0 Moderate:1 High:0	
Publication of results (Yes/No)[11]	Yes	9/10	
Publication of tables that compare school performance (Yes/No)	Yes	2/10	
Possible influence of national periodical assessments (lower secondary education) (2006) Source: Education at a Glance (OECD, 2008)[3] None/Low/Moderate/High[14]			
Performance feedback to the school	a	None:4 Low:1 Moderate:2 High:3	
Performance appraisal of the school management	a	None:6 Low:2 Moderate:1 High:0	
Performance appraisal of individual teachers	a	None:8 Low:1 Moderate:0 High:0	
The school budget	a	None:8 Low:1 Moderate:0 High:0	
The provision of another financial reward or sanction	a	None:9 Low:0 Moderate:0 High:0	
The assistance provided to teachers to improve their teaching skills	a	None:5 Low:1 Moderate:3 High:0	
Remuneration and bonuses received by teachers	a	None:9 Low:1 Moderate:0 High:0	
Likelihood of school closure	a	None:9 Low:0 Moderate:0 High:1	
Publication of results (Yes/No)[11]	a	7/12	
Publication of tables that compare school performance (Yes/No)	a	2/12	
Existence of national tests (2008-09) Source: Eurydice (2009)[15]	Yes	30/35	
Number of national tests (2008-09) (primary and lower secondary education) Source: Eurydice, (2009)[15]			
Compulsory tests	11	2.7	1/22
Sample tests	0	2.3	-
Optional tests[16]	0	2.3	-
Years of testing	2,3,4,6,7,8,9		
Number of subjects covered in national tests[17]	More than 3	2 subjects:14 3+ subjects:13	3 subjects:11 Does not apply:4
Main aims of nationally standardised tests (2008-09) (primary and lower secondary education) Source: Eurydice (2009)[11, 15] (Yes/No)			
Taking decisions about the school career of pupils	Yes	17/30	
Monitoring schools and/or the education system	No	21/30	
Identifying individual learning needs	Yes	12/30	
Bodies responsible for setting national tests (2008-09) (primary and lower secondary education) Source: Eurydice (2009)[10, 15] ●Tests for taking decisions about the school career of pupils/■Tests for other purposes/ΔNo national tests			
A unit/agency within the ministry of education without external players	●	●2 ■0 Δ5	
A unit/agency within the ministry of education with external players	■	●3 ■10 Δ5	
A public body distinct from the ministry, which specialises in education or educational evaluation	-	●11 ■16 Δ5	
A private body or university department	-	●4 ■4 Δ5	

	Denmark	Country Average[1]	Denmark's Rank[2]
People in charge of administering national tests (2008-09) (primary and lower secondary education) Source: Eurydice (2009)[10, 15] ●Tests for taking decisions about the school career of pupils/ ■Tests for other purposes / ΔNo national tests			
Class teachers	● ■	●10 ■15 Δ5	
Class teachers + external people	-	●1 ■3 Δ5	
Other teachers from the same school	-	●3 ■3 Δ5	
Other teachers from the same school + external people	-	●1 ■4 Δ5	
External people alone	-	●3 ■5 Δ5	
Persons in charge of marking national tests (2008-09) (primary and lower secondary education) Source: Eurydice (2009)[10, 15] ●Tests for taking decisions about the school career of pupils/■Tests for other purposes/ΔNo national tests			
Class teachers	-	●7 ■10 Δ5	
Class teachers + external people	-	●4 ■2 Δ5	
Other teachers from the same school	-	●1 ■3 Δ5	
Other teachers from the same school + external persons	-	●0 ■1 Δ5	
External persons alone	● ■	●8 ■16 Δ5	
Standardisation of test questions (2008-09) (primary and lower secondary education) Source: Eurydice (2009)[11, 15] (Yes/No)			
Questions are the same for all pupils taking one national test	No	19/3	
Questions are not the same for all pupils taking one national test	Yes	8/30	
Whether test questions are standardised or not varies depending on type of test	No	2/30	
Data not available	No	1/30	
Use of ICT in national testing (2008-09) (primary and lower secondary education) Source: Eurydice (2009)[11, 15] (Yes/No)			
ICT is currently used in national tests	Yes	11/30	
Use of ICT for on-screen testing	Yes	3/30	
Use of ICT for marking tests	No	9/30	
Participation of students with special educational needs (SEN) in national testing (2008-09) (primary and lower secondary education) Source: Eurydice (2009)[11, 15] (Yes/No)			
Pupils with SEN may take part in national testing	No	27/30	
Participation in national testing for pupils with SEN is compulsory	No	12/30	
Participation in national testing for pupils with SEN is optional	No	9/30	
Participation varies depending on type of test, level of education or type of school	No	5/30	
Data not available	No	1/30	
Communication of the results of national tests to local authorities (2008-09) (primary and lower secondary education) Source: Eurydice (2009)[11, 15] (Yes/No)			
Local authorities have access to aggregated results for their own area	Yes	17/30	
Use of achievement data for accountability (2009) (15-year-olds) Source: PISA Compendium for the school questionnaire (OECD, 2010c)[3] % of students in schools where the principal reported that achievement data is used in the following procedures			
Posted publicly	45.0	36.4	12/33
Used in evaluation of the principal's performance	29.9	35.5	18/33
Used in evaluation of teachers' performance	37.0	44.2	=18/33
Used in decisions about instructional resource allocation to the school	35.2	32.2	14/33
Tracked over time by an administrative authority	55.7	65.2	23/33

SCHOOL EVALUATION			
Requirements for school evaluations by an inspectorate (lower secondary education) (2006) Source: Education at a Glance (OECD, 2008)[3] None/1 per 3+ years/1 per 3 years/1 per 2 years/1 per year/1+ per year	m	None:4 1 per 3+ years:5 1 per 3 years:6 1 per 2 years:0 1 per year:1 1+ per year:1	
Possible influence of school evaluation by an inspectorate (lower secondary education) (2006) Source: Education at a Glance (OECD, 2008)[3] None/Low/Moderate/High[14] Influence on performance feedback			
Performance feedback to the school	m	None:0 Low:1 Moderate:1 High:10	
Performance appraisal of the school management	m	None:0 Low:2 Moderate:3 High:7	
Performance appraisal of individual teachers	m	None:1 Low:5 Moderate:2 High:3	

	Denmark	Country Average[1]	Denmark's Rank[2]
Financial and other implications			
The school budget	m	None:5 Low:2 Moderate:2 High:1	
The provision of another financial reward or sanction	m	None:4 Low:4 Moderate:0 High:1	
The assistance provided to teachers to improve their teaching skills	m	None:1 Low:2 Moderate:6 High:2	
Remuneration and bonuses received by teachers	m	None:6 Low:1 Moderate:2 High:0	
Likelihood of school closure	m	None:2 Low:3 Moderate:2 High:2	
Publication of results (Yes/No)[11]	m	11/13	
Publication of tables that compare school performance (Yes/No)	m	1/12	
Requirements for school self-evaluations (lower secondary education) (2006)			
Source: Education at a Glance (OECD, 2008)[3]		None:6 1 per 3+ years:1	
None/1 per 3+ years/1 per 3 years/1 per 2 years/1 per year/1+ per year	m	1 per 3 years:1 1 per 2 years:0 1 per year:8 1+ per year:3	
Possible influence of school self-evaluations (lower secondary education) (2006)			
Source: Education at a Glance (OECD, 2008)[3]			
None/Low/Moderate/High[14]			
Influence on performance feedback			
Performance feedback to the school	m	None:1 Low:2 Moderate:1 High:8	
Performance appraisal of the school management	m	None:2 Low:2 Moderate:4 High:4	
Performance appraisal of individual teachers	m	None:4 Low:4 Moderate:2 High:2	
Financial and other implications			
The school budget	m	None:5 Low:2 Moderate:2 High:1	
The provision of another financial reward or sanction	m	None:4 Low:4 Moderate:1 High:0	
The assistance provided to teachers to improve their teaching skills	m	None:3 Low:2 Moderate:1 High:5	
Remuneration and bonuses received by teachers	m	None:5 Low:3 Moderate:0 High:1	
Likelihood of school closure	m	None:8 Low:0 Moderate:1 High:0	
Publication of results (Yes/No)[11]	m	4/14	
Publication of tables that compare school performance (Yes/No)	m	1/14	
Frequency and type of school evaluations (lower secondary education) (2007-08)			
Source: TALIS (OECD, 2009b)[9]			
% of teachers working in schools where school evaluations were conducted with the following frequency over the last five years			
Frequency of school self-evaluation			
Never	32.4	20.2	4/23
Once	15.1	16.2	11/23
2-4 times	19.8	18.3	9/23
Once per year	25.4	34.9	19/23
More than once per year	7.3	10.3	12/23
Frequency of external evaluation			
Never	53.0	30.4	5/23
Once	22.4	30.8	17/23
2-4 times	10.9	20.5	20/23
Once per year	11.5	11.4	10/23
More than once per year	2.2	7.0	=13/23
No school evaluation from any source	25.4	13.8	4/23
Criteria of school evaluations (lower secondary education) (2007-08) Source: TALIS (OECD, 2009b)[9]			
% of teachers whose school principal reported that the following criteria were considered with high or moderate importance in school self-evaluations or external evaluations			
Student test scores	55.8	76.2	22/23
Retention and pass rates of students	68.4	70.8	15/23
Other student learning outcomes	78.7	78.9	14/23
Student feedback on the teaching they receive	69.6	72.7	13/23
Feedback from parents	58.5	77.3	21/23
How well teachers work with the principal and their colleagues	65.6	83.7	22/23
Direct appraisal of classroom teaching	50.8	71.1	20/23
Innovative teaching practices	37.5	76.7	22/23
Relations between teachers and students	83.1	87.1	16/23
Professional development undertaken by teachers	73.7	81.5	19/23
Teachers' classroom management	62.5	80.7	22/23
Teachers' knowledge and understanding of their main subject field(s)	67.0	78.2	20/23
Teachers' knowledge and understanding of instructional practices in their main subject field(s)	52.9	77.5	20/23
Teaching of students with special learning needs	65.8	77.2	19/23
Student discipline and behaviour	76.3	83.6	=19/23
Teaching in a multicultural setting	43.9	52.9	14/23
Extra-curricular activities with students (*e.g.* school plays and performances, sporting activities)	48.8	74.5	21/23

	Denmark	Country Average[1]	Denmark's Rank[2]
Impacts of school evaluations upon schools (lower secondary education) (2007-08) Source: TALIS (OECD, 2009b)[9]			
% of teachers whose school principal reported that school evaluations (external or self-evaluation) had a high or moderate level of influence on the following			
Level of school budget or its distribution within schools	22.3	38.0	18/23
Performance feedback to the school	52.9	81.3	23/23
Performance appraisal of the school management	58.5	78.7	21/23
Performance appraisal of teachers	32.5	71.1	23/23
Assistance provided to teachers to improve their teaching	44.3	70.3	22/23
Teachers' remuneration and bonuses	9.0	26.1	17/23
Publication of school evaluations (lower secondary education) (2007-08) Source: TALIS (OECD, 2009b)[9]			
% of teachers in schools where school evaluation results were :			
Published; or	84.5	55.3	1/23
Used in school performance tables	54.8	28.7	3/23
Use of student test results in school evaluation (2008-09) (primary and lower secondary education) Source: Eurydice (2009)[11, 15] **(**Yes/No)			
Test results may be used for evaluation	No	15/30	
Test results used for external evaluation	No	5/30	
Recommendations or support tools for the use of results during internal evaluation	No	7/30	
Use varies depending on type of test, level of education or type of school	No	3/30	
Publication of individual school results in national tests (2008-09) (primary and lower secondary education) Source: Eurydice (2009)[11, 15] (Yes/No)			
Individual school results may be published	Yes	10/30	
Publication organised, or required of schools, by central/local governments	Yes	9/30	
Publication at the discretion of schools	No	1/30	
Accountability to parents (2009) (15-year-olds) Source: PISA Compendium for the school questionnaire (OECD, 2010c)[3]			
% of students in schools where principals reported that their school provides parents with information on:			
This child's academic performance relative to other students in the school	-	46.1	-
This child's academic performance relative to national or regional benchmarks	37.4	46.8	20/33
This child's academic performance of students as a group relative to students in the same grade in other schools	30.4	23.1	9/33

TEACHER APPRAISAL			
Frequency and source of teacher appraisal and feedback (lower secondary education) (2007-08) Source: TALIS (OECD, 2009b)[9]			
% of teachers who reported having received appraisal and/or feedback on their work with the following frequency from the following sources			
Feedback received from the principal			
Never	14.2	22.0	15/23
Less than once every two years	9.2	9.2	8/23
Once every two years	8.9	4.5	4/23
Once per year	37.5	22.8	1/23
Twice per year	8.5	12.3	=18/23
3 or more times per year	16.0	17.1	=12/23
Monthly	2.7	6.6	22/23
More than once per month	3.0	5.4	17/23
Feedback received from other teachers or members of the school management team			
Never	21.3	28.6	16/23
Less than once every two years	6.9	6.9	12/23
Once every two years	1.7	2.6	19/23
Once per year	9.7	13.3	17/23
Twice per year	8.7	9.7	14/23
3 or more times per year	27.4	19.3	3/23
Monthly	12.5	10.4	8/23
More than once per month	11.7	9.1	5/23
Feedback received from an external individual or body (*e.g.* external inspector)			
Never	69.7	50.7	5/23
Less than once every two years	9.2	19.0	17/23
Once every two years	1.9	5.4	20/23
Once per year	5.7	13.2	=17/23
Twice per year	4.8	5.4	8/23
3 or more times per year	5.3	4.3	7/23
Monthly	1.5	1.2	6/23
More than once per month	2.0	0.8	3/23

	Denmark	Country Average[1]	Denmark's Rank[2]
Criteria for teacher appraisal and feedback (lower secondary education) (2007-08) Source: TALIS (OECD, 2009b)[9]			
% of teachers who reported that the following criteria were considered with high or moderate importance in the appraisal and/or feedback they received			
Student test scores	28.6	65.0	23/23
Retention and pass rates of students	25.3	56.2	22/23
Other student learning outcomes	44.5	68.4	23/23
Student feedback on the teaching they receive	60.7	72.8	17/23
Feedback from parents	56.4	69.1	20/23
How well they work with the principal and their colleagues	70.0	77.5	20/23
Direct appraisal of classroom teaching	40.7	73.5	23/23
Innovative teaching practices	35.7	70.7	23/23
Relations with students	75.7	85.2	22/23
Professional development undertaken	46.4	64.5	22/23
Classroom management	61.6	79.7	23/23
Knowledge and understanding of their main subject field(s)	47.1	80.0	23/23
Knowledge and understanding of instructional practices in their main subject field(s)	41.1	78.2	23/23
Teaching of students with special learning needs	39.5	57.2	23/23
Student discipline and behaviour	56.3	78.2	23/23
Teaching in a multicultural setting	22.9	45.0	=21/23
Extra-curricular activities with students (*e.g.* school performances, sporting activities)	42.5	62.3	20/23
Outcomes of teacher appraisal and feedback (lower secondary education) (2007-08) Source: TALIS (OECD, 2009b)[9]			
% of teachers who reported that the appraisal and/or feedback they received let to a modest or large change in the following aspects of their work and careers			
A change in salary	2.2	9.1	=16/23
A financial bonus or another kind of monetary reward	2.7	11.1	16/23
A change in the likelihood of career advancement	4.7	16.2	=21/23
Public recognition from the principal and/or their colleagues	25.3	36.4	17/23
Opportunities for professional development activities	25.6	23.7	10/23
Changes in work responsibilities that make the job more attractive	19.0	26.7	14/23
A role in school development initiatives (*e.g.* curriculum development group)	16.3	29.6	22/23
Actions undertaken following the identification of a weakness in a teacher appraisal (lower secondary education) (2007-08) Source: TALIS (OECD, 2009b)[9]			
% of teachers whose school principal reported that the following occurs if an appraisal of teachers' work identifies a specific weakness			
The principal ensures that the outcome is reported to the teacher			
Never	0.9	2.6	8/23
Sometimes	15.7	9.5	3/23
Most of the time	27.9	25.8	8/23
Always	55.5	62.1	18/23
The principal ensures that measures to remedy the weakness in their teaching are discussed with the teacher			
Never	0.0	1.0	=11/23
Sometimes	10.7	9.4	7/23
Most of the time	28.3	30.7	14/23
Always	61.0	58.9	13/23
The principal, or others in the school, establishes a development or training plan for the teacher to address the weakness in their teaching			
Never	7.6	10.5	16/23
Sometimes	37.3	33.0	8/23
Most of the time	34.3	35.9	12/23
Always	20.8	20.6	10/23
The principal, or others in the school, imposes material sanctions on the teacher (*e.g.* reduced annual increases in pay)			
Never	94.9	86.0	9/23
Sometimes	4.2	11.3	15/23
Most of the time	1.0	1.8	10/23
Always	0.0	0.9	=14/23
The principal, or others in the school, report the underperformance to another body to take action (*e.g.* governing board, local authority, school inspector)			
Never	73.5	51.0	3/23
Sometimes	24.5	37.3	20/23
Most of the time	1.0	6.8	=20/23
Always	1.0	4.9	=18/23

	Denmark	Country Average[1]	Denmark's Rank[2]
The principal ensures that the teacher has more frequent appraisals of their work			
Never	5.3	9.0	12/23
Sometimes	42.9	34.5	7/23
Most of the time	34.7	41.3	16/23
Always	17.1	15.2	9/23
Teacher perceptions of the appraisal and/or feedback they received (lower secondary education) (2007-08) Source: TALIS (OECD, 2009b)[9]			
% of teachers who reported the following about the appraisal and/or feedback they had received in their school			
Appraisal and/or feedback contained a judgement about the quality of the teacher's work	69.6	74.7	16/23
Appraisal and/or feedback contained suggestions for improving certain aspects of teacher's work	36.0	58.0	21/23
Appraisal and/or feedback was a fair assessment of their work as a teacher in this school			
Strongly disagree	4.3	4.4	9/23
Disagree	10.0	12.4	=14/23
Agree	65.3	63.3	11/23
Strongly agree	20.5	19.9	9/23
Appraisal and/or feedback was helpful in the development of their work as teachers in this school			
Strongly disagree	6.0	5.6	9/23
Disagree	17.7	15.9	9/23
Agree	61.6	61.8	13/23
Strongly agree	14.7	16.8	14/23
Teacher perceptions of the personal impact of teacher appraisal and feedback (lower secondary education) (2007-08) Source: TALIS (OECD, 2009b)[9]			
% of teachers who reported the following changes following the appraisal and/or feedback they received in their school			
the following personal impact from appraisal and feedback			
Change in their job satisfaction			
A large decrease	1.3	2.5	18/23
A small decrease	3.5	4.8	18/23
No change	51.3	41.2	4/23
A small increase	35.1	37.3	16/23
A large increase	8.8	14.2	17/23
Change in their job security			
A large decrease	0.7	1.5	=22/23
A small decrease	1.3	3.0	=21/23
No change	81.9	61.9	2/23
A small increase	11.2	21.8	21/23
A large increase	5.0	11.8	19/23
Impact of teacher appraisal and feedback upon teaching (lower secondary education) (2007-08) Source: TALIS (OECD, 2009b)[9]			
% of teachers who reported that the appraisal and/or feedback they received directly led to or involved moderate or large changes in the following			
Classroom management practices	18.2	37.6	23/23
Knowledge or understanding of the teacher's main subject field(s)	10.9	33.9	23/23
Knowledge or understanding of instructional practices	11.1	37.5	23/23
A development or training plan for teachers to improve their teaching	12.4	37.4	23/23
Teaching of students with special learning needs	13.9	27.2	23/23
Student discipline and behaviour problems	19.5	37.2	23/23
Teaching of students in a multicultural setting	6.3	21.5	23/23
Emphasis placed by teachers on improving student test scores in their teaching	19.3	41.2	23/23
Teacher appraisal and feedback and school development (lower secondary education) (2007-08) Source: TALIS (OECD, 2009b)[9]			
% of teachers who agree or strongly agree with the following statements about aspects of appraisal and/or feedback in their school			
In this school, the school principal takes steps to alter the monetary reward of the persistently underperforming teacher	6.6	23.1	21/23
In this school, the sustained poor performance of a teacher would be tolerated by the rest of the staff	40.7	33.8	8/23
In this school, teachers will be dismissed because of sustained poor performance	35.0	27.9	6/23
In this school, the principal uses effective methods to determine whether teachers are performing well or badly	37.8	55.4	20/23
In this school, a development or training plan is established for teachers to improve their work as teachers	54.4	59.7	14/23

	Denmark	Country Average[1]	Denmark's Rank[2]
In this school, the most effective teachers receive the greatest monetary or non-monetary rewards	15.0	26.2	13/23
In this school, if I improve the quality of my teaching I will receive increased monetary or non-monetary rewards	8.3	25.8	19/23
In this school, if I am more innovative in my teaching I will receive increased monetary or non-monetary rewards	9.0	26.0	=20/23
In this school, the review of teacher's work is largely done to fulfil administrative requirements	48.1	44.3	9/23
In this school, the review of teacher's work has little impact upon the way teachers teach in the classroom	60.8	49.8	4/23
Official methods for the individual or collective evaluation of teachers (2006-07)			
Source: Eurydice (2008) [11, 15]			
Teacher evaluation exists	Yes	30/33	
Teacher inspection on an individual or collective basis	Yes	22/30	
School self-evaluation	No	14/30	
Individual evaluation by school heads	No	16/30	
Individual evaluation by peers	No	5/30	
Methods used to monitor the practice of teachers (2009) (15-year-olds)			
Source: PISA Compendium for the school questionnaire (OECD, 2010c)[3]			
% of students in schools where the principal reported that the following methods have been used the previous year to monitor the practice of teachers at their school			
Tests of assessments of student achievement	40.4	58.3	28/34
Teacher peer review (of lesson plans, assessment instruments, lessons)	32.0	56.3	28/34
Principal or senior staff observations of lessons	68.6	68.3	22/34
Observation of classes by inspectors or other persons external to the school	33.9	28.0	13/34

STUDENT ASSESSMENT			
The influence of test results on the school career of pupils (2008-09) (primary and lower secondary education)			
Source: Eurydice (2009)[10, 15]			
ISCED 1/ ISCED 2[4]			
Award of certificates	ISCED 2	ISCED 1:2 ISCED 2:12	
Streaming	-	ISCED 1:4 ISCED 2:2	
Progression to the next stage of education	-	ISCED 1:1 ISCED 2:2	
No national tests, or no impact on progression	ISCED 1	ISCED 1:29 ISCED 2:22	
Completion requirements for upper secondary programmes			
Source: Education at a Glance (OECD, 2009a)[3, 10]			
● Final examination /■ Series of examinations during programme /Δ Specified number of course hours and examination / ♦ Specified number of course hours only			
ISCED 3A[4]	● ■ Δ	●21 ■19 Δ19 ♦3	
ISCED 3B	a	●6 ■8 Δ7 ♦0	
ISCED 3C	● ■ Δ	●17 ■18 Δ17 ♦1	
Student grouping by ability (2009) (15-year-olds)			
Source: PISA Compendium for the school questionnaire (OECD, 2010c)[3]			
% of students in schools where principals reported the following on student grouping by ability			
Student are grouped by ability into different classes			
For all subjects	1.2	9.4	30/33
For some subjects	14.4	37.4	27/33
Not for any subject	81.8	50.4	3/33
Student are grouped by ability within their classes			
For all subjects	4.7	4.5	8/33
For some subjects	40.2	46.4	21/33
Not for any subject	54.3	47.0	13/33
Groups of influence on assessment practices (2009) (15-year-olds)			
Source: PISA Compendium for the school questionnaire (OECD, 2010c)[3]			
% of students in schools where the principal reported the following groups exert a direct influence on decision making about assessment practices			
Regional or national education authorities (*e.g.* inspectorates)	58.9	56.6	17/33
The school's governing board	37.7	29.6	9/33
Parent groups	10.0	17.3	=19/33
Teacher groups (*e.g.* staff association, curriculum committees, trade union)	84.6	58.1	7/33
Student groups (*e.g.* student association, youth organisation	20.8	23.4	12/33
External examination boards	36.8	45.2	18/31

	Denmark	Country Average[1]	Denmark's Rank[2]
Responsibility for student assessment policies (2009) (15-year-olds)			
Source: PISA Compendium for the school questionnaire (OECD, 2010c)[3]			
% of students in schools where the principal reported the following groups have considerable responsibility in establishing student assessment policies			
Establishing student assessment policies			
Principals	77.7	63.5	13/33
Teachers	53.6	69.0	26/33
School governing board	45.7	26.5	5/33
Regional or local education authority	17.9	15.5	11/32
National education authority	29.5	24.3	11/33
Frequency of student assessment by method (2009) (15-year-olds)			
Source: PISA Compendium for the school questionnaire (OECD, 2010c)[3]			
% of students in schools where the principal reported the student assessment methods below are used with the indicated frequency			
Standardised tests			
Never	3.4	23.7	27/33
1-2 times a year	61.8	51.0	10/33
3-5 times a year	24.7	16.5	=7/33
Monthly	6.6	4.3	9/33
More than once a month	2.7	3.4	10/33
Teacher-developed tests			
Never	2.4	2.7	3/33
1-2 times a year	11.5	6.7	=7/33
3-5 times a year	50.2	30.0	5/33
Monthly	24.0	27.6	20/33
More than once a month	10.3	33.3	30/33
Teachers' judgmental ratings			
Never	0.2	6.6	27/33
1-2 times a year	20.9	12.0	5/33
3-5 times a year	48.1	22.9	3/33
Monthly	11.3	15.7	26/33
More than once a month	18.7	42.2	30/33
Student portfolios			
Never	4.9	24.1	27/33
1-2 times a year	13.2	34.4	30/33
3-5 times a year	25.5	20.6	10/33
Monthly	31.4	10.4	2/33
More than once a month	22.3	9.3	5/33
Student assignments/projects/homework			
Never	0.2	1.5	=20/33
1-2 times a year	10.0	12.2	15/33
3-5 times a year	13.8	16.1	18/33
Monthly	23.9	13.6	4/33
More than once a month	51.2	56.5	21/33
% of students reporting the following on the frequency of homework (2000)			
Source: PISA Student Compendium (Reading) (OECD, 2000) (15-year-olds)			
Teachers grade homework			
Never	12.8	14.9	=12/27
Sometimes	47.0	44.2	=12/27
Most of the time	29.4	24.5	11/27
Always	8.1	13.9	17/27
Teachers make useful comments on homework			
Never	14.4	23.5	23/27
Sometimes	53.9	50.1	4/27
Most of the time	24.2	19.2	7/27
Always	5.1	4.9	=8/27
Homework is counted as part of marking			
Never	7.4	13.7	=18/27
Sometimes	35.0	33.3	12/27
Most of the time	34.4	25.7	6/27
Always	19.1	24.7	18/27

	Denmark	Country Average[1]	Denmark's Rank[2]
Use of student assessments (2009) (15-year-olds)			
Source: PISA Compendium for the school questionnaire (OECD, 2010c)[3]			
% students in schools where the principal reported that assessments of students are used for the following purposes			
To inform the parents about their child's progress	96.0	97.5	28/33
To make decisions about students' retention or promotion	8.6	77.1	30/33
To group students for instructional purposes	52.4	49.8	14/33
To compare the school to district or national performance	32.5	53.0	27/33
To monitor the school's progress from year to year	34.0	76.0	33/33
To make judgements about teachers' effectiveness	8.0	46.9	33/33
To identify aspects of instruction or the curriculum that could be improved	83.9	76.7	15/33
To compare the school with other schools	27.7	45.4	23/33
% of students repeating a grade in the previous school year according to reports by school principals in the following levels (2009) (15-year-olds)			
Source: PISA Compendium for the school questionnaire (OECD, 2010c)[3]			
ISCED2[4]	0.3	3.2	=22/29
ISCED3	0.3	4.5	=24/29
Parents' perception of school's monitoring of student progress (2009) (15-year-olds)			
Source: PISA Compendium for the parent questionnaire (OECD, 2010b)[3]			
% of parents who agree or strongly agree with the following statements[18]			
My child's progress is carefully monitored by the school			
Strongly agree	15.7	18.5	7/8
Agree	61.0	59.4	5/8
Disagree	19.7	17.3	3/8
Strongly disagree	2.1	2.2	4/8
My child's school provides regular and useful information on my child's progress			
Strongly agree	14.7	19.9	6/8
Agree	58.0	54.3	4/8
Disagree	22.9	19.7	3/8
Strongly disagree	3.4	4.0	2/8
Level of school autonomy regarding the criteria for the internal assessment of pupils (2006-07) (primary and lower secondary education)			
Source: Eurydice (2008)[11, 15]			
Full/Limited/No autonomy	Full	Full:24 Limited:10 No:0	
School decision-makers involved in determining the criteria for the internal assessment of pupils (2006-07) (primary and lower secondary education)			
Source: Eurydice (2008)[11, 15]			
School responsibility involved	Yes	34/34	
School head	No	0/34	
Teachers individually or collectively	Yes	13/34	
School management body	No	0/34	
Responsibilities vary depending on level of education	No	21/34	
School autonomy in preparing the content of examinations for certified qualifications (2006-07) (primary and lower secondary education)			
Source: Eurydice (2007)[11, 15]			
School responsibility involved/ examinations for certified qualifications exist	No	24/34	
Full/Limited/No autonomy	No	Full:5 Limited:0 No:19	
School decision-makers who may be involved in preparing the content of examinations for certified qualifications (ISCED 2)[4] (2006-07)			
Source: Eurydice (2007)[11, 15]			
School responsibility involved/ examinations for certified qualifications exist	No	5/34	
School head	No	0/5	
Teachers individually or collectively	No	1/5	
School management body	No	0/5	
Responsibilities vary depending on level of education	No	4/5	

Sources:
Eurydice (2008), *Levels of Autonomy and Responsibilities of Teachers in Europe*, Eurydice, Brussels.
Eurydice (2009), *National Testing of Pupils in Europe: Objectives, Organisation and Use of Results*, Eurydice, Brussels.
OECD (2000), *PISA Student Compendium (Reading)*, OECD, *http://pisa2000.acer.edu.au/downloads.php/*
OECD (2008), *Education at a Glance, OECD Indicators 2008*, OECD, Paris.
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OECD (2010a), *Education at a Glance, OECD Indicators 2010*, OECD, Paris.
OECD (2010b), *PISA 2009 Compendium for the parent questionnaire*, OECD, *http://pisa2009.acer.edu.au/downloads.php*
OECD (2010c), *PISA 2009 Compendium for the school questionnaire*, OECD, *http://pisa2009.acer.edu.au/downloads.php*
OECD (2010d), *PISA 2009 Results: What Students Know and Can Do, Volume I*, OECD, Paris.

Data explanation:

m	Data is not available
a	Data is not applicable because the category does not apply
~	Average is not comparable with other levels of education
=	At least one other country has the same rank

The report Eurydice (2009) includes all 32 member countries/education areas of the European Union as well as the members of the European Economic Area (Iceland, Liechtenstein and Norway).

TALIS is the OECD's Teaching and Learning International Survey which was implemented for the first time in 2007-08. The data provided concerns 23 countries. The results derived from TALIS are based on self-reports from teachers and principals and therefore represent their opinions, perceptions, beliefs and their accounts of their activities. Further information is available at *www.oecd.org/edu/talis*.

PISA is the OECD's Programme for International Student Assessment, which was undertaken in 2000, 2003, 2006 and 2009. 15-year-old students worldwide are assessed on their literacy in reading, mathematics and science. The study included 27 OECD countries in 2000, 30 in 2003 and 2006, and 34 in 2009. Data used in this appendix can be found at *www.pisa.oecd.org*.

General notes:

1. The country average is calculated as the simple average of all countries for which data are available.
2. "Denmark's rank" indicates the position of Denmark when countries are ranked in descending order from the highest to lowest value on the indicator concerned. For example, on the first indicator "population that has attained at least upper secondary education", for the age group 25-64, the rank 14/30 indicates that Denmark recorded the 14th highest value of the 30 countries that reported relevant data.
3. The column "country average" corresponds to an average across OECD countries.
4. ISCED is the "International Standard Classification of Education" used to describe levels of education (and subcategories).

ISCED 1 - Primary education

Designed to provide a sound basic education in reading, writing and mathematics and a basic understanding of some other subjects. Entry age: between 5 and 7. Duration: 6 years

ISCED 2 - Lower secondary education

Completes provision of basic education, usually in a more subject-oriented way with more specialist teachers. Entry follows 6 years of primary education; duration is 3 years. In some countries, the end of this level marks the end of compulsory education.

ISCED 3 - Upper secondary education
Even stronger subject specialisation than at lower-secondary level, with teachers usually more qualified. Students typically expected to have completed 9 years of education or lower secondary schooling before entry and are generally around the age of 15 or 16.

ISCED 3A - Upper secondary education type A
Prepares students for university-level education at level 5A

ISCED 3B - Upper secondary education type B
For entry to vocationally oriented tertiary education at level 5B

ISECD 3C - Upper secondary education type C
Prepares students for workforce or for post-secondary non tertiary education

ISCED 4 - Post-secondary non-tertiary education
Programmes at this level may be regarded nationally as part of upper secondary or post-secondary education, but in terms of international comparison their status is less clear cut. Programme content may not be much more advanced than in upper secondary, and is certainly lower than at tertiary level. Entry typically requires completion of an upper secondary programme. Duration usually equivalent to between 6 months and 2 years of full-time study.

ISCED 5 - Tertiary education
ISCED 5 is the first stage of tertiary education (the second – ISCED 6 – involves advanced research). At level 5, it is often more useful to distinguish between two subcategories: 5A, which represent longer and more theoretical programmes; and 5B, where programmes are shorter and more practically oriented. Note, though, that as tertiary education differs greatly between countries, the demarcation between these two subcategories is not always clear cut.

ISCED 5A - Tertiary-type A
"Long-stream" programmes that are theory based and aimed at preparing students for further research or to give access to highly skilled professions, such as medicine or architecture. Entry preceded by 13 years of education, students typically required to have completed upper secondary or post-secondary non-tertiary education. Duration equivalent to at least 3 years of full-time study, but 4 is more usual.

ISCED 5B - Tertiary-type B
"Short-stream" programmes that are more practically oriented or focus on the skills needed for students to directly enter specific occupations. Entry preceded by 13 years of education; students may require mastery of specific subjects studied at levels 3B or 4A. Duration equivalent to at least 2 years of full-time study, but 3 is more usual.

5. Public expenditure includes public subsidies to households for living costs (scholarships and grants to students/ households and students loans), which are not spent on educational institutions.

6. Expressed in equivalent US$ converted using purchasing power parities.

7. Expenditure on goods and services consumed within the current year which needs to be made recurrently to sustain the production of educational services – refers to current expenditure on schools and post-secondary non-tertiary educational institutions. The individual percentage may not sum to the total due to rounding.

8. Public and private institutions are included. Calculations are based on full-time equivalents. "Teaching staff" refers to professional personnel directly involved in teaching students.

9. The column "country average" corresponds to an average across TALIS countries.

10. The column "country average" indicates the number of countries/systems, in which a given criterion is used, for example, regarding the indicator "Decision on payments for teachers in public schools". In the row "Management responsibilities in addition to teaching duties", ●12 ■18 Δ7 indicates that this criterion is used to determine the base salary in 12 countries/systems, to determine an additional yearly payment in 18 countries/systems and to determine an additional incidental payment in 7 countries/systems.

11. The column "country average" indicates the number of countries for which the indicator applies. For example, for the indicator "mandatory national examination is required" 4/29 means, that 4 countries out of 29 for which data is available report that mandatory national examinations are required in their countries.

12. By "national examination" we mean those tests, which do have formal consequences for students.

13. By "national assessment" we mean those tests, which do not have formal consequences for students.

14. These measures express the degree of influence on the indicator: None: No influence at all, Low: Low level of influence, Moderate: Moderate level of influence, High: High level of influence. The column "country average" indicates the number of countries/systems, in which one of the given criteria is used.

15. For this indicator, the column "country average" refers to Eurydice member countries/areas.

16. "Compulsory tests" have to be taken by all pupils, regardless of the type of school attended, or by all students in public sector schools. "Optional tests" are taken under the authority of schools.

17. Austria, Belgium-Flemish Community, Ireland, Lithuania, Latvia, Sweden, England, Northern Ireland and Scotland apply several tests at the national level each with a distinct number of subjects. Thus, for these countries no exact number of subjects tested can be provided.

18. Results are based on reports from parents of the students who were assessed and reported proportionate to the number of 15-year-olds enrolled in the school.

Source Guide

Participation of countries by source

	PISA (OECD, 2000)	Education at a Glance (OECD, 2008)	Education at a Glance (OECD, 2009a)	TALIS (OECD, 2009b)	Education at a Glance (OECD, 2010a)	PISA Compendium (OECD, 2010b) PISA Results 2009 (OECD, 2010c)	Eurydice (2008)	Eurydice (2009)
Australia	●	●	●	●	●	●		
Austria	●	●	●	●	●	●	●	●
Belgium (Flemish Community)		●	●	●	●		●	●
Belgium (French Community)	●	●	●		●	●	●	●
Belgium (German Community)							●	●
Brazil				●				
Bulgaria				●			●	●
Canada	●	●	●		●	●		
Chile					●	●		
Czech Republic	●	●	●		●	●	●	●
Denmark	●	●	●	●	●	●	●	●
Estonia				●		●	●	●
Finland	●	●	●		●	●	●	●
France	●	●	●		●	●	●	●
Germany	●	●	●		●	●	●	●
Greece	●	●	●		●	●	●	●
Hungary	●	●	●	●	●	●	●	●
Iceland	●	●	●	●	●	●	●	●
Ireland	●	●	●	●	●	●	●	●
Israel						●		
Italy	●	●	●	●	●	●	●	●
Japan	●	●	●		●	●		
Korea	●	●	●	●	●	●		
Latvia							●	●
Lichtenstein							●	●
Lithuania				●			●	●
Luxembourg	●	●	●		●	●	●	●
Malaysia				●				
Malta				●			●	●
Mexico	●	●	●	●	●	●		
Netherlands		●	●		●	●	●	●
New Zealand	●	●	●		●	●		
Norway	●	●	●	●	●	●	●	●
Poland	●	●	●	●	●	●	●	●
Portugal	●	●	●	●	●	●	●	●
Romania							●	●
Slovak Republic		●	●	●	●	●	●	●
Slovenia				●		●	●	●
Spain	●	●	●	●	●	●	●	●
Sweden	●	●	●		●	●	●	●
Switzerland	●	●	●		●	●		
Turkey		●	●	●	●	●		
UK - England							●	●
UK - Wales	●	●	●		●	●		●
UK - Norther Ireland							●	●
UK - Scotland							●	●
United States	●	●	●		●	●		

OECD Reviews of Evaluation and Assessment in Education

Denmark

How can student assessment, teacher appraisal, school evaluation and system evaluation bring about real gains in performance across a country's school system? The country reports in this series provide, from an international perspective, an independent analysis of major issues facing the evaluation and assessment framework, current policy initiatives, and possible future approaches. This series forms part of the OECD Review on Evaluation and Assessment Frameworks for Improving School Outcomes.

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