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Paulo Santiago and Claudia Tamassia



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Foreword

This report for Luxembourg forms part of the OECD Review on Evaluation and Assessment Frameworks for Improving School Outcomes (see Annex A for further details). 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. The 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.

Luxembourg was one of the countries which opted to participate in the country review strand and host a visit by an external review team. Members of the OECD review team were Claire Shewbridge (OECD Secretariat), co-ordinator of the Review; Melanie Ehren (Assistant Professor, Department of Educational Organisation and Management, University of Twente; Netherlands); Paulo Santiago (OECD Secretariat); and Claudia Tamassia (Programme Administrator Lead in the US-based Educational Testing Service [ETS]; Brazilian national). The review team was also joined in Luxembourg by Morten Rosenkvist (a secondee from the Norwegian Ministry of Education and Research formerly with the OECD Secretariat). We would like to express our gratitude to Morten for his work with the review team in formulating the preliminary conclusions. His robust analysis and insights helped to form a solid foundation for the development of our report. This publication is the report from the OECD review team. It provides, from an international perspective, an independent analysis of major issues facing the evaluation and assessment framework in Luxembourg, current policy initiatives, and possible future approaches. The report serves three purposes: (1) provide insights and advice to Luxembourgish education authorities; (2) help other OECD countries understand the Luxembourgish approach; and (3) provide input for the final comparative report of the project.

Luxembourg's involvement in the OECD Review was co-ordinated by Amina Kafaï of the Agency for the Development of Quality in Schools (ADQS) within the Ministry of National Education and Vocational Training (MENFP).

An important part of Luxembourg's involvement was the preparation of a Country Background Report (CBR) on evaluation and assessment policy developed by Amina Kafaï and Elise Aubert at the ADQS. The OECD review team is grateful to the authors for compiling this material as background to the review and analysis. The CBR is an important output from the OECD project in its own right as well as an important source for the OECD review team. Unless indicated otherwise, the data for this report are taken from the Luxembourgish CBR. 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 school system, the main features of the evaluation and assessment framework and the views of key stakeholders. In this sense, the CBR and this report complement each other and, for a more comprehensive view of evaluation and assessment in Luxembourg, should be read in conjunction.

The review visit to Luxembourg took place on 31 May – 4 June 2010. The itinerary is provided in Annex B. The visit was designed by the OECD in collaboration with the Luxembourgish authorities. The biographies of the members of the OECD review team are provided in Annex C. It should be noted that the scope for the review of Luxembourg (as in all participating countries) was limited to primary and lower secondary education, that is, the pre-school part of "fundamental education" in Luxembourg was not analysed.

During the review visit, the team held discussions with the MENFP; pedagogical experts; the education authority *inspecteurs* for fundamental schools; teacher representatives; parents' organisations; representatives of *directeurs*; representatives of students with special needs; teacher educators; civil society organisations; and researchers with an interest in evaluation and assessment issues. The team also visited a range of fundamental and secondary schools, interacting with secondary school *directeurs*, presidents and their management teams, teachers and students in Luxembourg. 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.

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 during the early stage of the reform in fundamental schooling. Special words of appreciation are due to the National Co-ordinator, Amina Kafaï, for doing everything possible to respond to the questions and needs of the OECD review team. We thank her also for sharing her insights and expertise and for being excellent company during the heavy schedule of the review. We extend our gratitude to staff of the ADQS for lending support and giving us some of their precious time. The courtesy and hospitality extended to us throughout our stay in Luxembourg 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 Thomas Radinger for preparing the statistical annex to this Country Review report (Annex D) and to Heike-Daniela Herzog for editorial support.

This report is organised in six chapters. Chapter 1 provides the national context, with information on the Luxembourgish school system, main trends and concerns, and recent developments. Chapter 2 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 3 to 6 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 recommendations.

The policy recommendations attempt to build on and strengthen reforms that are already underway in Luxembourg, and the strong commitment to further improvement that was evident among those we met. The suggestions should take into account the difficulties that face any visiting group, no matter how well briefed, in grasping the complexity of Luxembourg and fully understanding all the issues.

Of course, this report is the responsibility of the OECD review team. While we refer where possible to the Luxembourgish CBR and other documents, and benefited from many discussions with a wide range of Luxembourgish stakeholders, any errors or misinterpretations in this report are our responsibility.

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Acronyms and abbreviations

ADQS	Agency for the Development of Quality in Schools (*Agence pour le développement de la qualité scolaire*)
CIS	School Inclusion Commission (*Commission d'inclusion scolaire*)
CPOS	School Psychology and Orientation Service (*Centre de psychologie et d'orientation scolaires*)
EMACS	Educational Measurement and Applied Cognitive Science
ES	General secondary education (*Enseignement secondaire*)
EST	Technical secondary education (*Enseignement secondaire technique*)
IEA	International Association for the Evaluation of Educational Achievement
MENFP	Ministry of National Education and Vocational Training (*Ministère de l'Éducation nationale et de la Formation professionnelle*)
MO	Modular or preparatory regime in technical secondary education (*classe modulaire du régime préparatoire de l'enseignement secondaire technique*)
OECD	Organisation for Economic Co-operation and Development
PDS	School Development Plan recommended in secondary schools (*Plan de Développement Scolaire)*
PIRLS	IEA's Progress in International Reading Literacy Study
PISA	OECD's Programme for International Student Assessment
PPP	Tests at the end of fundamental schooling for promotion to secondary schooling (*épreuves passage primaire-post-primaire)*
PROCI	Project for Lower Technical Secondary Education (*Projet Cycle Inférieur*)
PRS	School Development Plan in fundamental schools (*Plan de Réussite Scolaire)*
SCRIPT	Department for the Co-ordination of Research in Pedagogical and Technological Innovation (*Service de Coordination de la Recherche et de l'Innovation Pédagogiques et Technologiques*)
TALIS	OECD's Teaching and Learning International Survey

Executive summary

A central drive of recent educational policy making in Luxembourg has been to develop evaluation instruments to strengthen the focus on student performance and progress in classrooms, schools and at the policy-making level within the Ministry of National Education and Vocational Training (MENFP). This has come alongside an increased degree of autonomy for schools, although the school system remains highly centralised with the MENFP responsible for the planning and administration of all teaching in public schools. The MENFP directly appoints a school leader (*directeur*) in public secondary schools, but each fundamental school is under the authority of a local education authority *inspecteur*, who in the absence of a permanent school leader, monitors fundamental school compliance to laws and regulations and reports back to the MENFP. Typically at age 11, children are assessed primarily on their ability in German, French and mathematics and selected to attend either general secondary education (ES) or technical education (EST).

Both national and international evidence point to some worrying inequities within the Luxembourg school system: grade repetition is a common practice that contributes to a high age-grade discrepancy; and international comparisons of student performance at age 15 reveal a larger than average group of low performing students and a major performance disadvantage for students with an immigrant background. In response, 2009/10 saw the reorganisation of the first nine years of schooling into four pedagogical cycles, each with a defined set of competency-based learning objectives (*socles de compétences*) that students must master by the end of the cycle in order to progress to the next pedagogical cycle. Students who have not achieved all learning objectives by the end of the cycle, can follow a special third year programme. Competency-based learning objectives have been introduced in French, German and mathematics in lower secondary education, but there is an ongoing discussion with key stakeholders to extend this throughout secondary education. Further, new student assessment initiatives have been introduced, including: requirements for teachers in fundamental schools to document student learning progress; new standardised national assessments to monitor student outcomes against the learning objectives in French, German and mathematics in fundamental school (start of Cycle 3) and in lower secondary education (Grade 5ES and 9EST); and a national test with uniform content at the end of Cycle 4 of fundamental school (*épreuves standardisées*). There has also been a drive to strengthen school self-evaluation, with requirements for schools to produce development plans and national support offered to schools by the Agency for the Development of Quality in Schools (ADQS). At the same time, the MENFP has commissioned and evaluates several pilot studies in different schools to encourage innovative approaches to teaching and learning. In this dynamic and fast-evolving context, the OECD review team identified the following priorities for the further development of evaluation and assessment policies in Luxembourg.

Pull together the different evaluation and assessment initiatives into a coherent framework

Many of the recently introduced evaluation and assessment initiatives have been developed in parallel and do not yet work together well. Continued support and capacity building in schools is of key importance (see below), but there is also a need to bring the different initiatives into a coherent evaluation and assessment framework. An important first step will be to adequately align the various aspects that are currently in place or being introduced. Notably, the new competency-based learning objectives should be at the heart of evaluation and assessment activities, including regular formative assessment activities with students, national assessments, school development plans and the national monitoring and reporting system. Stakeholders will benefit from a more explicit detailing of how evaluation and assessment activities at the student, teacher, school and school system level link together. For example, how non-standardised national tests (*épreuves communes*), national tests with uniform content (*épreuves standardisées*) and standardised national assessments complement each other, as well as the regular classroom assessment activities set by teachers to inform on student learning progress, and how the results from all these student assessment activities fit into school self-evaluation activities. A second step will be to further develop and complete the evaluation and assessment framework, for example: develop a set of teaching standards and a common understanding of school quality in Luxembourg; validate processes in place to organise developmental teacher appraisal; and consider introducing an external school evaluation mechanism to confront schools with a common, external perspective and information on their quality. External school evaluations can bring greater depth and breadth to internal evaluations in schools by providing useful observations and evidence from other schools, challenging the school's development plan and self-evaluation criteria, and evaluating the school's capacity for self-evaluation.

Continue to prioritise efforts to build evaluation and assessment capacity throughout the school system

The implementation of the evaluation and assessment framework is at a critical stage and the continued prioritisation of capacity building at the school and national levels is more important than ever to ensure that the results of evaluation and assessment lead to improvements in student learning. New initiatives in student assessment and school self-evaluation have generated ample information for teachers, parents and schools, but these must be analysed, interpreted and used to improve student learning. It is, therefore, extremely important that continued and adequate attention is paid to training teachers, *directeurs* and *inspecteurs* in how to work most effectively with the results of evaluation and assessment. In this context, continued support by the ADQS is expected to have a positive impact on school capacity to implement self-evaluation and strategic improvement activities. Further, the implementation of new internal school structures for school development should be monitored to determine the type of training and capacity building support they require. This will be a good investment to build evaluation capacity internally within schools on a more sustainable basis. At the same time, the MENFP should recognise the importance of pedagogical leadership in implementing effective school self-evaluation activities and rethink the role of both *directeurs* and *inspecteurs* in this light. Finally, within the MENFP, it would be helpful to clarify different responsibilities and to ensure greater coherence in the development of evaluation and

assessment policies and tools for schools. Such planning should pay careful consideration to current capacity and assess the need to build and develop evaluation and assessment competencies where necessary. It is clear that the current responsibilities that fall within the ADQS need to be either redistributed within the MENFP or that the ADQS be given increased capacity.

Strengthen reporting against the competency-based learning objectives and analysis and discussion of results

The MENFP must ensure the statistical, analytical and research competencies to fully exploit existing information on the education system for policy development. The adequate analysis, interpretation and reporting of key results in a way that makes them accessible to all stakeholders will build support for education system evaluation and also promote the discussion of such results throughout the system. The publication of a regular overview report on the state of the education system is strongly recommended. The clear and comprehensive reporting in system-level publications against the competency-based learning objectives will play a vital role in promoting the acceptance and implementation of these in schools throughout Luxembourg. Further, there is room to actively promote discussion among key stakeholders of the major results from all national student assessments. This would offer an opportunity to promote deeper understanding of the competency-based learning objectives and timely feedback to the MENFP and the test developers. There is also room to improve the alignment of national targets for school improvement to school development plans by: ensuring the full and timely feedback to schools of student results in the standardised tests; introducing reporting requirements for schools, *e.g.* adding a section to their school development plan in which they describe how they will implement national reforms such as the competency-based student learning objectives, how they will align their curricula and teaching to these and how they will evaluate their implementation. These reporting requirements will increase awareness in schools of national reforms and student learning objectives and will demand that schools strategise and be transparent about how to implement these.

Raise the focus on equity within the evaluation and assessment framework and engage teachers in further refining the competency-based learning objectives

While the need to monitor equity is one of the stated drivers behind the initial conceptualisation of an evaluation and assessment framework in Luxembourg, there is room to raise the focus on this. In particular, a thorough review of the procedures in place to select students into different types of secondary education is recommended. National and international data clearly demonstrate that the current procedures disproportionately impact certain student groups. The standardised tests should be evaluated to ensure they deliver: valid measures against discrete areas of the national competency-based learning objectives; high reliability of results for comparison throughout the system; and stable core content to allow comparability of results across years. There should also be clear documentation and understanding of the suitability of these tests for students with different developmental needs. There is room for the MENFP to make better use of the results of all national assessment results to moderate teacher grading in high-stakes student assessment. Finally, the planned review of the implementation of the competency-

based learning objectives should examine to what extent these can be better harmonised across general and technical streams of secondary education. As it stands, the risk is that these simply follow the existing structure of the school system and miss the opportunity to promote greater flexibility for student transition among the different streams. As part of this process, it will be important to review evidence from various stakeholders (students, teachers and parents, notably). Teachers should be systematically engaged as partners in actively working toward the further refinement and development of the competency-based learning objectives and related assessment tools.

Chapter 1

School education in Luxembourg

The chapter presents the main features of schooling in Luxembourg, including the structure of the school system and how students advance through it, the key role of languages and responsibilities within the school system. It also examines evidence on the quality and equity of Luxembourgish schools and considers major policy developments impacting the school system.

This chapter provides an overview of the key features of schooling in Luxembourg for readers who are not familiar with the system, with an aim to better contextualise the approaches to assessment and evaluation.

Main features of the school system

A highly stratified school system with limited school choice for parents and students

Compulsory schooling from age 4 to 15

In Luxembourg, schooling is compulsory for a minimum of 12 years between the ages of 4 and 15. Children start their compulsory schooling in fundamental schools, of which there are 154 in Luxembourg. The typical age of attendance is from age 4 to 11. In 2009, 47 051 students attended fundamental school. For fundamental education, children are enrolled by the district (*commune*) in the nearest school, *i.e.* enrolment by residential area. However, parents can write to a neighbouring *commune* to request their child be enrolled at school there, if this is linked to a family member or legal guardian residing there or the parent(s) work place is near that school (ADQS, 2011).

Academic selection at ages 11 and 14 or 15

At the typical age of 12, students attend secondary school. There are 35 secondary schools divided into two major types of educational provision: general secondary education (ES); and technical secondary education (EST), including a stream for preparatory or "modular" vocational education. Although it is typical for a secondary school to offer only one of these major types of education, some schools do offer both general and technical education, most commonly for the first three years of lower secondary education. Children are oriented to one of these educational pathways at the end of fundamental school (typical age of 11, although the high incidence of grade repetition means that many children will be older). A School Orientation Council (*conseil d'orientation*) is responsible for this decision, although parents do have the right to appeal (see Chapter 3).

- General secondary (ES): comprises three years of lower secondary (Grades 7ES, 6ES and 5ES) and four years of upper secondary (Grades 4ES, 3ES, 2ES and 1ES). At the end of their fourth year of lower secondary general education, students specialise in one of seven types of upper secondary general education (modern languages; mathematics and IT; natural sciences and mathematics; economics and mathematics; arts; music; humanities and sciences). ES leads to a secondary school diploma which allows students entry to university.
- Technical secondary (EST): comprises lower, middle and upper cycles and can last between six and eight years depending on students' performance and choices. The lower cycle comprises three years (Grades 7EST, 8EST and 9EST). After three years, students are oriented to one of three pathways:
  - vocational (two more years, leading to certificate of technical and professional aptitude)
  - technician (four more years, leading to a Technician's diploma)
  - technical (four or five more years, leading to Technical diploma which allows students' entry to university)

- Within technical education, the preparatory or "modular" vocational education: comprises nine modules per subject. As students progress through the modules, they become eligible to integrate into mainstream technical secondary education (EST). This modular provision aims to cater to students who are struggling to follow mainstream technical secondary education.

Majority public provision, but with substantial private provision in general secondary education

The vast majority of students attend public schools and a small proportion of students attend schools that are privately managed but primarily funded by the Luxembourgish government (see Table 1.1). All such students follow the national student learning objectives, participate in national assessments and are awarded nationally recognised qualifications. However, students in independent private schools do not follow national curriculum or qualification systems, although they benefit from 40% of the public funding costs.

Table 1.1 Number and proportion of students enrolled by type of school (2010/11)

	Public schools	Government-dependent private	Independent private	Total
Fundamental schools	46 125	127	4 372	50 624
Percentage	91%	0%	9%	
General secondary (ES)	12 414	411	4 361	17 186
Percentage	72%	2%	25%	
Technical secondary (EST)	22 504	3 375	112	25 991
Percentage	87%	13%	0%	

Source: MENFP (2012).

The core role of languages in Luxembourg's school system

Student performance and the use of evaluation and assessment in Luxembourg must be considered within the context of two unique and interrelated national characteristics:

- Luxembourg's focus on its multilingual tradition. *Lëtzebuergesch*, French and German are official as well as teaching languages. The three languages are considered essential for social unity and the teaching and learning of these languages is assigned a central role (ADQS, 2011; Carey & Ernst, 2006). This is a fundamental feature of Luxembourgish culture.
- Luxembourg has a large immigrant population. The country's proportion of immigrants – over 47% of students and 65% of the active population – influences how the system works.

These two characteristics, along with the system's overall centralised and stratified structure, interact in a circular relationship that shapes students' performance, attainment rates and overall success.

Regarding stratification, languages carry a heavy weight in determining future opportunities for students. Contrary to the overall philosophy of the government that multiple languages at a young age increase social unity, in a highly stratified system, the

outcome seems to be wider inequality in terms of immigrant status and gender across the various tracks. Around 50% of the curriculum is devoted to the teaching of languages. Fundamental education is taught in *Lëtzebuergesch* in Cycle 1 and in German in Cycles 2 to 4. National statistics show that immigrant children are more commonly oriented towards secondary technical education. In 2009/10, secondary general education comprised 81.4% native Luxembourgish whereas this percentage for secondary technical education was 57.5% (MENFP, 2011a, 2011b). Regarding gender, the percentages of female students in secondary general education was 54.2% and in technical education was 47.4% respectively (MENFP, 2011a, 2011b). These characteristics are often referred to in discussions about the need for educational reform. Further, these characteristics are highlighted by PISA results that show a wide distribution in student performance between schools and a large impact of socio-economic factors on student performance, which is consistent with stratified systems (OECD, 2004; MENFP, 2010a; also see below).

Traditionally a high incidence of grade repetition

In Luxembourg, grade repetition is a common practice that contributes to a high age-grade discrepancy in the educational system – and dropouts. In 2010/11, 17.9% of students in fundamental education (against 19.6% in 2008/09), 18.6% in secondary general and 63.5% in secondary technical education were older than the theoretical age for their grade (MENFP, 2012b, 2010b). Intended to lower this percentage, the competency-based approach introduced four pedagogical cycles and changed the way promotion is established – rather than strictly by year, students are now allowed extra time, if necessary, to complete each pedagogical cycle. Thus, under this approach, the focus is on levels of proficiency rather than time. Difficulties in teaching language can also play a role in grade repetition – Germanic languages are used for teaching in fundamental education and the French language is gradually introduced in secondary education – and in particular this may pose an extra obstacle to those students with an immigrant background who speak none of the teaching languages at home (see below).

Responsibilities

Education in Luxembourg is highly centralised with the Ministry of National Education and Vocational Training (MENFP) responsible for the planning and administration of all teaching in public schools (ADQS, 2011). See also Chapter 2 for further details.

Fundamental education

Each of the 21 local education authorities (*arrondissements*) in Luxembourg has an Inspector (*inspecteur*) who is the hierarchical head of all teachers in schools within that *arrondissement*. Thus, there is no hierarchical authority permanently present at any fundamental school. In 2007/08 there was a ratio of one *inspecteur* to 22 physical school buildings (Eurydice, 2010), however, the legal entity of "school" as stipulated in 2009 regroups many of these individual buildings and each *inspecteur* typically manages 5 to 11 schools. However, there are some organisational bodies in place within each fundamental school. Primarily, there is the School Committee (*comité d'école*) which has an elected president who is responsible for the smooth functioning of the school, including relations with the *inspecteur* and parents. For each of the four pedagogical cycles within fundamental education, there is a Cycle Co-ordinator (*coordinateur de cycle*) who co-ordinates the pedagogical team for that cycle (*l'équipe pédagogique du cycle*). Each pedagogical team comprises the class teacher (*titulaire de classe*) for each

class within that cycle, *e.g.* the pedagogical team for Cycle 2 comprises the class teachers for children aged 6 and 7.

There are other bodies external to fundamental school with important roles. These may be linked to the *arrondissement* or the *commune*. Each *arrondissement* has at least one School Inclusion Commission (*Commission d'inclusion scolaire*, CIS) comprising the *inspecteur*, one teacher, three members of the *arrondissement*'s special multi-professional team of psychologists, physiotherapists, speech therapists, etc (*équipe multiprofessionnelle*) and in some cases a Doctor or social assistant. The *équipe multiprofessionnelle* can provide special support to each school's pedagogical team, mainly in the case of children with special educational needs. Further, each *inspecteur* can draw on a special support teacher (*instituteur-ressources*) who provides specialised pedagogical expertise to schools (in 2009/10, there were ten special support teachers in Luxembourg, there are now twenty). Each *commune* has a District School Commission (*Commission scolaire communal*) comprising the mayor, representatives of the district council, as well as representatives for teachers and parents within the district. Parents can also seek representation of a professional from the School Psychology and Orientation Service (*Centre de psychologie et d'orientation scolaires*, CPOS) during the decision at the end of Cycle 4 on student orientation to general or technical secondary education.

Secondary education

Public secondary schools are directly managed by the MENFP, via the direct appointment of a school leader (*directeur*) and the setting of a detailed legal framework, including general objectives, curriculum, student assessment, school time-tables, etc. and more recently a requirement to establish a School Development Unit. Within this centrally specified legal and financial framework, the *directeur* is responsible for administrative, technical and financial matters, as well as the implementation of national curriculum and pedagogical projects, and is assisted by a deputy and a management team. The *directeur* is responsible for evaluating the school and reports directly to the MENFP.

Quality and equity of schooling outcomes

In international comparison, Luxembourg has a highly skilled population. The proportion of adults with at least upper secondary education has been above average since the 1970s and between 1997 and 2009 the proportion of the population that had not attained upper secondary education decreased by 5% or more per year (OECD, 2011). In Luxembourg, the proportion of 25-to-34-year-olds having attained upper secondary education or higher is 84% (compared to an OECD average of 81%), which is ten percentage points higher than the proportion of 45-to-54-year-olds with an upper secondary education or higher[1]. Over the same period, the number of 25-to-64 year-olds holding a tertiary-level qualification has grown by over 5% on average per year. Indeed, 44% of 25-to-34-year-olds hold a tertiary qualification compared to an OECD average of 37%. This sees Luxembourg with a healthy stock of highly qualified individuals.

However, current graduation rates at the upper secondary level are substantially lower than in the OECD on average (69% in Luxembourg; 82% in OECD). Further, the performance of 15-year-old students in the OECD Programme for International Student Assessment (PISA) surveys since 2000 has consistently disappointed. Luxembourgish students performed below average in the PISA 2009 reading assessment (472 score points compared to an OECD average of 493 score points) and there has been no improvement

in average performance in reading or mathematics since the 2003 survey (OECD, 2010a). In fact, the proportion of students unable to perform the most basic tasks in the PISA mathematics assessment grew between 2003 and 2009[2].

Indeed, Luxembourg is less equitable than other school systems in terms of the proportion of low-skilled students: 26.0% of students in Luxembourg demonstrated a lower level of reading proficiency than that considered to be the baseline at which students start to demonstrate the reading literacy competencies that will enable them to participate effectively and productively in life (18.8% on average in the OECD). The PISA 2009 results confirmed that there are some worrying inequities within Luxembourg's school system:

- Socio-economic factors strongly influence student performance: Differences in student socio-economic background explained a higher proportion of the variance in student reading performance than on average in the OECD and the most advantaged quarter of Luxembourgish students outscored the least advantaged quarter by 115 score points, indicating a significant educational gap.[3]
- Performance differences among schools are strongly related to socio-economic differences: As would be expected with the different types of secondary schooling offered to Luxembourgish students, a higher proportion of reading performance is observed between schools than on average in the OECD. However, socio-economic differences among students and schools account for more than twice as much of the observed between-school performance differences in Luxembourg, compared to on average in the OECD.[4]
- Major performance disadvantage on average for students with an immigrant background and this is particularly pronounced for certain groups: In terms of average reading performance, while native students perform around the OECD average (495 score points, compared to an OECD average of 499 score points for native students), students with an immigrant background perform way below the OECD average and in particular second-generation immigrant students perform comparatively worse in Luxembourg than in other OECD countries. They score an average of only 439 score points despite the fact they have followed all their schooling in Luxembourg (compared to an OECD average of 468 score points for second-generation students). These significant educational gaps are explained to some degree although not fully by differences in student socio-economic background. Among those students with an immigrant background taking the PISA 2009 reading assessment, those whose families originated from Portugal, the former Yugoslavia and Italy demonstrated the most significant performance disadvantage. [5]

Main policy developments

New organisational and pedagogical structure in fundamental education

In February 2009, a new law was introduced to reorganise the first nine years of schooling and this came into force in the 2009/10 academic year. "Fundamental education" regroups pre-primary education and primary education and is organised in four pedagogical cycles:

- Cycle 1: a first, optional year for children aged 3, plus two years of compulsory early childhood education for children aged 4 and 5. Children aged 4 on 1 September must enrol in the second year of Cycle 1.
- Cycle 2: two years for children aged 6 and 7.
- Cycle 3: two years for children aged 8 and 9.
- Cycle 4: two years for children aged 10 and 11.

For each cycle, there is a defined set of learning objectives (*socles de compétences*) that students are expected to master by the end of the cycle in order to progress to the next pedagogical cycle (teachers also consider students' attitudes, motivation and potential to succeed). This allows a stock-taking of students' learning progress every two years. If a student has not achieved all learning objectives by the end of the cycle, he/she will follow an individual programme incorporating a third year into the cycle that the pedagogical team draws up. Learning objectives are defined for six areas: literacy, German, French and Luxembourgish, plus language awareness; mathematics; discovery of sciences; physical expression, movement, sports and health; discovery of aesthetics, creativity, culture, arts and music; and life in a community, social and moral values or religious and moral education.

This reform, therefore, seeks to shift the focus to student outcomes, by defining the minimum learning content for students at each level and requiring teachers to assess students against these.

Introduction of a monitoring system

In 2008, the MENFP commissioned the development of standardised national assessments to monitor student outcomes at two major points of their compulsory schooling: once in fundamental school (start of Cycle 3) and once in lower secondary education (Grade 5ES and 9EST). The standardised national assessments are aligned to the national learning objectives for French, German and mathematics. These complement results collected by the MENFP from the national non-standardised tests (*épreuves communes*) at the end of lower secondary education, as well as results from international assessments which are also used to monitor schooling outcomes.

Piloting innovative approaches to teaching and learning organisation

Since 2003, the MENFP has launched several initiatives to allow participating schools a degree of autonomy to pilot innovative approaches to teaching and learning.

There was a targeted pilot project to inform the possible reform of technical secondary education. This was known as the Project for Lower Technical Secondary Education (PROCI) initiative and encompassed six technical secondary schools (around 1 700 students in total) in 2003 piloting new ways of teaching, learning and assessment. The major aims of the PROCI initiative were to find ways to reduce grade repetition and to improve learning support to students in technical education, with the aim to increase success rate at the second academic selection stage at age 14 (Grade 9EST). These initiatives have been closely monitored and evaluated by the MENFP.[6]

In addition, three new schools have been established in 2005, 2007 and 2008 with mandates and freedom to offer different school provisions using innovative teaching and learning strategies. For example, this may include extended school days. These initiatives are also closely monitored and evaluated by the MENFP.

Proposal to extend the competency-based learning approach reform to secondary education

In December 2011, a first draft of a proposal to reform the secondary school in Luxembourg was published and is the basis for an ongoing nationwide consultation with all stakeholders[7]. Discussions of the proposal will continue until early 2013. This draft is the result of discussions and reflections between the MENFP and secondary school teachers on preparatory documentation that started in March 2010 (in turn, this was based on the introduction of the competency-based approach in 2007). The major proposed measures in the reform would include:

- a new two-year cycle for the first two years of secondary education (*i.e.* a continuation of the idea of blocks of two-year cycles in fundamental schools) with competency-based learning objectives and close guidance via a tutor of individual students to ensure carefully considered subject specialisation at the end of the third year;
- subject specialisation in upper secondary schools will allow greater flexibility for students and be organised in two general subject bands in both general and technical secondary schools;
- plus a greater degree of pedagogical autonomy for secondary schools in fixing a particular school profile and three year development plan.

Notes

1. The OECD average is 71% and the proportion of 45-to-54-year-olds having attained at least upper secondary education in Luxembourg is 74% (see Annex E).

2. 21.7% of student in Luxembourg performed at Level 2 or below in the PISA 2003 mathematics assessment, but this increased by 2.2% in PISA 2009 (OECD, 2010a).

3. 18.0% of variance in student reading performance is explained by the PISA index of socio-economic and cultural status (ESCS) (OECD average = 14.0%). Luxembourgish students in the top quarter of the index of ESCS had a mean reading performance of 526 score points (OECD average = 540 score points) and those in the bottom quarter, 411 score points (OECD average = 451 score points) (OECD, 2010b).

4. Overall, reading performance variance in Luxembourg is greater than on average in the OECD (124.2, versus 100.6 in the OECD). Further, 61.6% of reading performance variance lies between schools in Luxembourg, in contrast to 41.7% in the OECD. The PISA index of socio-economic and cultural status (ESCS) explains 50.5% of the between-school reading performance variance in Luxembourg, more than twice as much as in the OECD on average (23.8%). While there are significant differences among the average index of ESCS value for schools attended by native students (0.11) and for schools attended by students with an immigrant background (-0.15), this is less than on average in the OECD (0.04 and -0.26, respectively). All data are taken from OECD, 2010b.

5. The average reading performance disadvantage for students with an immigrant background is -52 score points, but this is reduced to -19 score points after accounting for the PISA index of socio-economic and cultural status (ESCS). This compares to a disadvantage of -43 score points on average in the OECD, reduced to -27 score points with the equivalent adjustment. Differences in student socio-economic and cultural status are more pronounced in Luxembourg between native and immigrant students than in other OECD countries (0.91 index points in Luxembourg, compared to 0.44 on average in the OECD). Reading averages are as follows for students whose families originate from: the former Yugoslavia (412 score points); Portugal (413 score points); Italy (443 score points). All data are taken from OECD, 2010b.

6. For example, see: *www.men.public.lu/actualites/2007/03/070321_proci/index.html?highlight=proci* and *www.men.public.lu/actualites/2010/12/101207_cp_pisa2009/index.html.*

7. See: *www.men.public.lu/priorites/111205_reforme_secondaire/index.html.*

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Chapter 2

The evaluation and assessment framework

This chapter presents a succinct overview of the major components of evaluation and assessment in Luxembourg (student assessment, teacher appraisal, school evaluation and education system evaluation) and examines to what extent these form part of a coherent framework and how these different components work together. It presents an analysis of the current strengths and challenges and a set of recommendations to build on and consolidate current efforts in designing and completing a coherent evaluation and assessment framework.

Context and features

This chapter examines the overall framework for evaluation and assessment in Luxembourg, *i.e.* the major components of student assessment, teacher appraisal, school evaluation and education system evaluation, how these work together and the coherence of the whole framework. Following this overview, Chapters 3 to 7 will examine issues relevant to each of the major components in depth.

Governance

In general, Luxembourg has a centralised and highly stratified education system and this – in turn with the small scale of the education system – leads to a centralised approach to evaluation and assessment, although over recent years there has been a stronger role for schools in implementing evaluation and assessment policies, notably with the increased emphasis placed on school self-evaluation. Indeed, the Ministry of National Education and Vocational Training (MENFP) is committed to working with all school partners in designing evaluation and assessment policies (ADQS, 2011), but ultimately holds decision-making power. However, teacher appraisal stands out as a component of the evaluation and assessment framework without any national guidelines beyond an official appraisal for new teachers following their probationary period. The majority of schools are publicly funded and managed. The MENFP is responsible for the planning and administration of all teaching in public schools (ADQS, 2011).

Public secondary schools are directly managed by the MENFP, via the direct appointment of a school leader (*directeur*) and the setting of a detailed legal framework, including general objectives, curriculum, student assessment, school time-tables, etc. and more recently a requirement to establish a School Development Unit. The *directeur* is responsible for administrative, technical and financial matters, as well as the implementation of national curriculum and pedagogical projects, and is assisted by one or more deputies and a management team. The *directeur* is expected to evaluate the school and report directly to the MENFP.

Up to 2009, the MENFP and the districts were jointly responsible for public fundamental schools, but in addition to its responsibility for school staff salaries, the MENFP now appoints teachers and assigns them to the districts. Each fundamental school is under the authority of a local education authority *inspecteur* who acts as an intermediary between fundamental schools and the MENFP and for example conducts official teacher evaluation activities. The *inspecteur* also monitors school compliance to laws and regulations and reports back to the MENFP. Therefore, district administrators have no responsibility in evaluation and assessment matters, although they remain responsible for school organisation (assigning teachers to schools within the district and children to classes) and the funding of school infrastructure. There is a certain degree of autonomy in fundamental schools regarding the organisation of learning, which is reflected in student assessment activities and school development planning. Although, student assessment activities are highly prescribed in terms of criteria and methods of reporting on student progress, teachers play a central role in student summative assessment.

Main components

In a nutshell, the evaluation and assessment framework in Luxembourg comprises the following main components:

- **Student assessment**: Approaches to student assessment are very centralised in Luxembourg, but teachers' professional judgement plays the major role in student progression and summative assessment. Traditionally, student assessment comprises largely student tests developed by teachers, but in fundamental education may include alternative approaches such as portfolios and observation, and more recently includes standardised national assessments. In secondary education, student performance on teacher-developed tests is documented in summary grades at the end of each trimester according to a centralised scoring approach. Each student receives an annual score drawing together student performance across subjects in each trimester. In 2009, the introduction of centrally defined minimum competency levels for student learning aimed to introduce a more qualitative assessment of student learning. In fundamental education, there has been a gradual introduction of two new methods to document student learning progress (initially in Cycles 1 and 2). These are formative reports at the end of each trimester (*bilan intermédiaire*) and summative reports at the end of each two-year learning cycle (*bilan de fin de cycle*). The latter summarise student performance and determine their eligibility for promotion to the next learning cycle. More qualitative feedback has also been introduced in secondary education where students receive an additional feedback sheet on their competency levels to complement their scores in each academic subject (*complement au bulletin*). National standardised assessments are used in German, French and mathematics at two different points during students' compulsory education. In addition, at the end of Cycle 4, student results in nationally developed and locally administered and scored tests in German, French and mathematics are considered in making the decision of their orientation to either general or technical secondary education. Non-standardised tests in French and German (developed by students' teachers) are administered nationally during the third year of secondary education and contribute to the students' trimester average score. Student performance in German, French and mathematics is the major determinant of their orientation at the end of fundamental education and at the end of the third year of technical secondary or the fourth year of general secondary education.
- **Teacher appraisal**: Teacher appraisal is not regulated by law and no formal procedures exist to evaluate the performance of permanent teachers. The only existing requirement relates to the 24-month probationary period for new entrants to the teaching profession. In fundamental education, appraisal at the end of this probationary period is undertaken by the local authority inspector (*inspecteurs*) as there are no school leaders (*directeurs*) in fundamental schools. In secondary education, teachers sit an examination at the end of the probationary period. The only other time that official appraisal is undertaken by the *inspecteurs* is upon the request of a teacher in a fundamental school to move to a teaching post in a different school. The *inspecteurs* and *directeurs* are responsible for teacher performance in fundamental and secondary education, respectively, but often do not undertake regular appraisal of individual teachers. At the secondary level, the *directeurs* are supposed to hold regular interviews with teachers to promote dialogue, establish common objectives and monitor work achievements.

However, no central guidance on how to evaluate teacher performance, nor shared appraisal criteria are offered. Beyond the appraisal at the end of the probationary period, teacher appraisal has no impact on teachers' career progression or influence on their pay levels. Only in extreme cases, do *inspecteurs* initiate disciplinary procedures. Similarly, *directeurs* have few mechanisms to identify objectively and to address potential underperformance and cannot mandate professional development activities for teachers.

- **School evaluation**: In Luxembourg the focus of school evaluation lies on school self-evaluation, but strong national requirements and supports have been put in place over recent years that drive these internal evaluations. The major requirements are in fundamental schools and include the drawing up of school development plans in which schools set and evaluate goals every four years, and establishing new structures for collaboration and school development. These structures are important in the absence of a school leader and include a school committee which is responsible for drawing up the school development plan and for daily school management (comprising three to nine members, of which at least two-thirds are teachers, and one president elected by the school teachers for a 5-year period), as well as co-ordinators and pedagogical teams for each of the four pedagogical cycles. The *inspecteur* must approve the school development plan and should assist the school's pedagogical team in its annual evaluation of school progress against this plan. Further, the *inspecteur* provides the school with feedback on the quality of teaching and learning and conducts formal teacher appraisal (see above). In a similar vein, it is recommended for secondary schools to set goals and action plans (most are starting to do so) and since late 2011 secondary schools are required to establish a school development unit (typically including school management and teachers with an advisory or co-ordinating role). Other centrally designed elements to aid school self-evaluation comprise the new student learning objectives and feedback of results from national standardised assessments. In order to stimulate school evaluation capacity, the Agency for School Quality Development (ADQS) within the Ministry of National Education and Vocational Training (MENFP) was established in 2009 and provides tailored support to schools in establishing and following up their development plans. There is no external evaluation of schools in Luxembourg beyond compliancy checking via the submission of mandatory annual audit reports (*contingent*) by *directeurs* of secondary schools to the MENFP and via the direct monitoring of the implementation of rules and regulations by *inspecteurs* in fundamental schools.

- **Education system evaluation**: Responsibilities for education system evaluation lie firmly within the Ministry of National Education and Vocational Training (MENFP). The Department for the Co-ordination of Research in Pedagogical and Technological Innovation (SCRIPT) plays a major role in providing evidence for policy making at the system and school levels. The Innovation Division conducts and oversees pilot studies for potential school reforms and the Agency for School Quality Development (ADQS) both supports schools in their internal evaluation and use of results from the national monitoring system and provides information for education system monitoring, including the *ad hoc* monitoring of national initiatives. The Statistics and Analysis Department collects, compiles and reports core data on the education system. The monitoring system comprises statistics on student progression through schooling and school leaving qualifications, plus outcome information coming from participation in international assessments and

the administration of both non-standardised and standardised national assessments. The recent development of standardised national assessments (outsourced to the University of Luxembourg, but overseen by the SCRIPT) has strengthened the national monitoring system. The national student learning objectives provide goals against which to evaluate the education system, as do specific targets within the European Union's 2020 programme. Further, the MENFP should monitor progress against specific school improvement objectives specified in the 5-year government programme.

Strengths

A change of paradigm in educational policy making shifting to a focus on outputs and equity

There has been a clear change of paradigm in educational policy making. This largely corresponds to government policy introduced five years ago with the objective to improve school quality in Luxembourg. A policy document in 2007 set out the idea of steering the education system in Luxembourg with a tighter, more coherent evaluation and assessment framework (MENFP-SCRIPT, 2007). The central idea is to use outcome information to better monitor student progress throughout their schooling and overall outcomes at the system level. To this end, the document serves as a basis to develop evaluation instruments to strengthen the focus on student performance and progress in classrooms, schools and at the policy-making level within the MENFP. It outlines the MENFP's intention to adapt teaching and learning to a competency approach, to define standards, to introduce a degree of autonomy to schools and to reform initial teacher education (ADQS, 2011).

Importantly, evaluation instruments are seen to play a key role in monitoring and shedding light on the reasons behind the large impact that student socio-economic and migrant background has on their school performance. This strengthened focus on equity is stimulated largely by analysis of outcomes in the PISA assessments (MENFP-SCRIPT and Université du Luxembourg, 2007; see also Chapter 1). Policy for addressing equity rests on the monitoring of key outcomes for different student groups via national assessments and the use of school self-evaluation to identify and address significant factors behind school failure (ADQS, 2011).

The introduction of a competency approach to learning in schools

The OECD review team commends the MENFP's decision to introduce a competency approach to learning in schools. Such an approach using standard-defined competencies to be attained by students at different ages can be a powerful tool to improve teaching and address students' learning needs. The implementation strategy has been to gradually introduce standards, first in 2007 at the secondary level in basic subjects (languages and mathematics), followed by the introduction of standards in four major pedagogical cycles in fundamental schools in 2009 and the ongoing development of standards in other secondary school subjects. The centrally defined minimum competency levels for student learning are intended to strengthen teachers' focus on student learning progress with an aim to improving their outcomes. As an illustration, guidance offered to teachers in fundamental schools includes the description of the main competency levels to be attained by students at the end of each pedagogical cycle, plus performance descriptors to illustrate these and recommended learning content.

At the same time, there has been the gradual introduction of new reporting requirements for teachers to document student learning progress against these competencies. Within fundamental schools, implementation of such reporting has followed the student cohort through each pedagogical cycle (see Chapter 3). The MENFP also has actively sought feedback on these new reporting tools from teachers and parents at the early stage of implementation. First results of questionnaires administered in early 2010 indicated support for the new tools from both teachers and parents, with parents expressing strongly positive feedback, but teachers noting the increased workload (ADQS, 2011).[1]

In parallel to the reforms in the content of learning and the expected impact this has on the teaching approach in fundamental schools, there is commitment to raise the profile of teaching in fundamental schools with the reform of initial education for teachers at this level to ensure that they obtain university-level qualification (ADQS, 2011).

The strong potential for the Ministry of National Education and Vocational Training to steer evaluation and assessment activities

Despite recent moves to introduce a degree of autonomy to schools in respect of their choice of teaching materials and lesson scheduling, the school system in Luxembourg remains largely centralised. In general, this means that the MENFP has a considerable steering ability in regards setting the framework conditions for schooling. Specifically, the MENFP wields substantial authority in the area of evaluation: "All decisions related to implementing evaluation strategies fall under the responsibility of either the MENFP or the Parliament if the strategy is embedded in a legal framework" (ADQS, 2011). This provides ideal conditions to draw up and establish a coherent evaluation and assessment framework. Beyond the legal framework in place that specifies among other things detailed student assessment criteria and tools to be used in schools (see Chapter 3) and school bodies and requirements for school development and planning activities (see Chapter 5), the MENFP also develops tools and guidelines to support schools in evaluation and assessment activities.

Launching and evaluation of initiatives to generate innovation within the system

There have been several initiatives supported by the MENFP to generate innovation within the school system. There is strong political support for the need to diversify the public school offer in Luxembourg given the increasingly heterogeneous student population. Notably, a law in 2005 paved the way to create a pilot secondary school with the mission to explore alternative pedagogical approaches. The pilot secondary school (the *Neie Lycée*) opened in September 2005 and combined innovative teaching, assessment and organisational approaches. As part of the law, the MENFP commissioned an evaluation after five years of different aspects of these innovative approaches. This reflects a strategic aim to share information for possible further innovations across the school system. Two other "new schools" were opened in 2007 (Jean Jaurès) and 2008 (Eis Schoul). In 2011, results of several evaluations of different aspects of the *Neie Lycée* were published by the MENFP on its website (see Université du Luxembourg, 2011; Koenig, 2011; Jurdant, 2011). In general, these were judged successful, particularly in terms of parental satisfaction, but also students reported relatively higher motivation compared to in other secondary schools. Student performance in national standardised tests and in PISA 2009 was average once the students' relatively less advantaged background was accounted for. However, the MENFP noted that most of these innovative

approaches were not easily transferable throughout the school system, but rather that other schools could draw lessons from some of the approaches. The MENFP uses results of such evaluations as a springboard to debate different areas of potential innovation throughout the school system, for example, the possible introduction of a general lesson on values and ethics and the reduction of school failure rates.

Further, there has been an initiative since 2003 with six technical secondary schools to use innovative teaching and learning approaches in lower technical secondary education (the PROCI initiative). This initiative was launched in response to concerns raised over technical secondary school outcomes in PISA 2000. The major innovations include a higher level of school autonomy, no use of grade repetition during the lower secondary technical cycle, and a stable pedagogical team following students through the cycle using a competency-based approach to learning and teaching. In PISA 2009, students in PROCI outperformed their counterparts in other technical schools by 20 score points (MENFP-SCRIPT and Université du Luxembourg, 2010).

Finally, the latest educational reform was tested out in pilot schools (*i.e. écoles en mouvement*) in 2008 (see Chapter 3).

Regular communication between the Ministry and schools

During the OECD review, the team formed the impression that there were close ties between the various stakeholder groups and the MENFP. The relatively small scale of the Luxembourg school system (154 fundamental schools and 35 secondary schools) is obviously capitalised on to foster regular communication between the MENFP and schools. Indeed, such regular communication is noted as "key to facilitate the implementation and feasibility of reforms, and to address the difficulties encountered in the schools" (ADQS, 2011). This regular communication is a considerable strength and takes place via both formal and informal channels. For example, the MENFP runs a website providing much detailed information about the reform in fundamental schools and the proposed reform in secondary education (see Chapter 3). The current policy approach is conceived as collaborative and while the MENFP has authority for decisions, it is committed to listening to the views of representatives from schools. Further, since the OECD review visit, the small ADQS division within the MENFP's SCRIPT department has met with nearly all fundamental school presidents in Luxembourg to discuss, review and support the development of school plans.

There are also structures in place to ensure formal communication between the MENFP and key stakeholders.

- For fundamental schools: officially, *inspecteurs* act as the intermediary between schools and the MENFP, plus there are regular meetings (every two weeks) of all *inspecteurs* to discuss among other things national reforms and policies; and the National School Commission which is a body that brings together representatives from local authorities, teachers, parents, teacher unions and the MENFP and is a major vehicle to ensure partnership among the key stakeholders in fundamental schooling. For example, in addition to organisational and budget matters, the National School Commission follows up on the content of the school curriculum.
- For secondary schools: each secondary school *directeur* is considered as a direct representative of the MENFP, plus there are regular meetings of all *directeurs* and their deputies at which the MENFP is represented to exchange and consult on national policies; each secondary school is represented on the National

Commissions for Curriculum (one commission per secondary school subject) which develops proposals on the school curriculum and teaching materials that are subject to validation by the MENFP; and the Higher Council for National Education which is an advisory board to the MENFP comprising representatives from the MENFP and other ministries (Sports, Health, Family), *inspecteurs*, *directeurs*, teacher unions, parents, students, professional chambers, private schools, clergy and cultural associations.

Efforts to build evaluation and assessment capacity within Luxembourg

Following a heightened political awareness of the need for a solid evidence base in decision making, there has been a concerted effort to introduce and build capacity in the area of evaluation and assessment. Notably, there is strong collaboration between the MENFP and the University of Luxembourg in the development of standardised assessments. Within the University, standardised test development is undertaken by the Educational Measurement and Applied Cognitive Science (EMACS) unit. The EMACS unit is also responsible for the administration of international assessments and – as in other countries – this has been a key factor in building national assessment capacity (see for example Goldstein and Thomas, 2008 and Tamassia and Adams, 2009). However, other units within the University are also actively engaged with the MENFP in efforts to improve school quality, including the Integrative Research Unit on Social and Individual Development, the Language, Culture, Media and Identities Unit and the Identities, Politics, Societies and Spaces Unit. These units were created from 2003 on and signal a strengthening of national research capacity that can play an important role in evaluation and assessment efforts.

Further, the OECD review team learned of a collaborative approach in developing the competency-based reform drawing on curriculum, assessment and evaluation expertise from Germany, Austria and Switzerland. The review team understood that the choice of expertise was largely driven by practical concerns (cultural and language factors). This ongoing regular exchange of information and expertise remains largely on a technical and functional level and has been an important input to the development process.

Challenges

Lack of evaluation and assessment framework and no common understanding of school quality

Similar to the situation in many other OECD countries, Luxembourg does not have a coherent framework for evaluation and assessment. Despite the production of a policy document in 2007, this does not yet concretely underpin evaluation and assessment activities and the OECD review team formed the opinion that many of these activities were developed in parallel and do not yet work together well (see also ADQS, 2011).

Some key components are missing or underdeveloped

Notably, some key components of an evaluation and assessment framework are missing. There is no legal framework for teacher appraisal and no formal and standardised procedures exist to evaluate the performance of permanent teachers (see Chapter 4) and there is no external evaluation of schools (the "*inspecteurs*" in fundamental schooling, although external to the school, have a managerial as well as evaluative role, see Chapter 5). Further, other elements within the evaluation and assessment framework are underdeveloped:

- The appraisal of secondary school leaders (the *directeurs* and their deputies) is not well developed, despite an implicit evaluation in the case of *directeurs* due to the fact that, as is the case for all public service mangers, appointments are set for a maximum of seven years, but are renewable (ADQS, 2011).
- The OECD review revealed little evidence of the systematic use of formative assessment (see Chapter 3). Despite the overall positive policy move to promote the importance of formative assessment (via a legal definition, the shift to a competency approach to learning and the introduction of regular formative feedback reports in fundamental schools), the intended formative function of these initiatives was not fully understood or effectively implemented at the school level at that early stage of implementation. Further, at the time of the OECD review, there was a significant delay in feedback to schools of student results in standardised assessments and these did not include results for individual students, thus significantly hindering their formative use.
- There is a lack of processes in place to ensure the validity of teacher grading as part of student summative assessment. The absence of adequate moderation procedures implies a significant challenge to the equity of final outcomes for students (see Chapter 3).

No common understanding of school quality

The OECD review team found a culture in schools where statements about the quality and functioning of the school are primarily based on informal exchange of information and observation instead of on formal criteria and the collection of evaluative information. In general, there is no overall conception and shared understanding of "quality". The *inspecteurs* in fundamental education do not have a common framework of indicators for school quality and interviews during the OECD review revealed that there are notable conceptual differences (see Chapter 5). Similarly, there is no profession-wide agreement on what counts as accomplished teaching – a key factor of school quality. There are no teaching standards, or clear professional profiles of what teachers are expected to know and be able to do (see Chapter 4). The common information that must be reported by secondary schools (*contingent*) is compliancy-oriented and does not speak to the quality of teaching and learning (see Chapter 5). Notably, at the time of the OECD review there was a varied implementation across schools of the competency-based student learning objectives leading to very different criteria and goals being used in school self-evaluation (see Chapter 5). The OECD review team notes that since the review the ADQS has been working on the development of a framework for school quality to serve as a common basis for school self-evaluation activities (MENFP, 2012a).

Some articulations among the different evaluation and assessment components are not sufficiently developed

There are missing links between teacher appraisal, professional development and school development (see Chapters 4 and 5). Teachers are free to choose which courses they follow as part of their eight hours of annual required professional development and in general do not consult with the *directeur* or, in fundamental schools, the president of the school committee. Therefore, individual professional development is not adequately aligned with school development needs, as documented in the school development plan.

For school self-evaluation, there are different mechanisms in place to evaluate school quality (*e.g.* the school development plan and output indicators), but these are not appropriately linked. At the time of the OECD review, the national standardised tests were not aligned to the implemented curriculum in classrooms and the feedback reports sent to *inspecteurs* and *directeurs* included only a general level of information that was not optimal for use in school evaluation activities (see Chapters 3 and 5). To the extent that schools have not yet adequately implemented the new competency-based student learning objectives, the results from national standardised tests are largely redundant for school improvement as schools are unable to relate the information to their own curriculum and teaching methods.

The reporting at the system level of school results in Luxembourg remains focused on the stratification of the school system and not on student learning objectives (*i.e.* the competency-based approach) (see Chapter 6).

The student is not at the centre of school evaluation and assessment policies

The underlying rigid structure of the school system in Luxembourg makes it hard to take actions based on evaluation results. In general, the student has to fit into the school system in Luxembourg. Despite recent progress with attempts to address this structural issue and place students at the centre of the evaluation and assessment framework (notably with the introduction of the competency approach and pedagogical cycles in fundamental schooling), the OECD review team noted that students have no say in their orientation or progress at key stages of schooling, little say in their learning and that there is limited account taken of the additional difficulties that the strong emphasis on student proficiency in *Lëtzebuergesch*, German and French poses for students with an immigrant background.

High incidence of grade repetition is not compatible with a student-centred school system

The high incidence of grade repetition in Luxembourg's school system is an obvious indicator that students are not at the centre of the assessment and evaluation framework. National data indicate that grade repetition is common practice in both fundamental and secondary schooling (see Chapter 1). Even at early stages of their learning, significant proportions of students are judged not to fit into the school system and are held back until they are judged ready to progress to the next step in the system. According to PISA 2009 data, grade repetition in Luxembourg is among the highest in OECD countries: 37% of 15-year-old students reported that they had repeated one or more grades during their schooling (second highest figure among the 34 OECD countries, against an OECD average of 13%, see Annex D). Reports from *directeurs* in PISA 2009 indicate that grade repetition is a prominent practice also in secondary schools and twice as high as on average in OECD countries (8% of lower secondary school students had repeated a grade in 2008, compared to an OECD average of 3%; 11% of upper secondary school students had repeated a grade in 2008, compared to an OECD average of 5%). Further, all *directeurs* reported that that student assessments were used to make decisions about students' retention or promotion (see Annex D).

There is wide recognition in educational research that grade repetition is an ineffective intervention for low achievement while it poses risks for equity in terms of bias based on social background (Field *et al.*, 2007). Reviews of the research literature by Brophy (2006) and Xia and Kirby (2009) concluded the following about school-imposed grade repetition:

- it improves academic achievement temporarily, but over time, grade repeaters fall further and further behind other low achievers who were promoted;
- it is stressful to students and associated with reduced self-esteem, impairs peer relationships, increases alienation from school, and sharply increases likelihood of eventual dropout;
- it makes classes larger and harder to manage for teachers and creates budgetary and equity problems for schools and school systems.

Research in both the United States and France suggests that social background, independent of school attainment, is an important determinant of repeating. This may be due to behavioural difficulties associated with social background, or because educated parents are in a stronger position to oppose a repetition proposed by the school. Therefore grade repetition may also pose risks for equity in terms of bias based on social background (Field *et al.*, 2007). Also, the costs of repetition for the education budget are substantial given the extra expenditure incurred in the repeated year and the opportunity costs of one year of the student's time. This is exacerbated by the fact that schools have very few incentives to take these large costs into account. In summary, grade repetition is ineffective and costly; this has both efficiency and equity implications (Field *et al.*, 2007).

Lack of flexibility in the process to determine students' future educational pathway

The orientation process at the end of Cycle 4 in fundamental education is high stakes for students. Overall, the documentation during the OECD review conveyed the impression that this is a holistic approach involving multiple parties and sources of input. This is positive overall. However, interviews during the OECD review indicated that the actual process seemed to lack transparency and, in reality, was guided primarily by students' performance in French, German and mathematics, with little input from parents. For example, although parents are able to request the opinion of an independent psychologist, this professional opinion carries no official weight in the decision-making process (see Chapter 3). This high emphasis on performance, primarily in languages, results in unequal access rates by social and cultural groups.

Further, interviews during the OECD review gave the impression that the communication regarding a student's orientation is very much top-down, where the school informs parents of its final decision. Although parents are allowed to appeal, there is limited flexibility because any revised decisions are based on additional testing in the same domains of French, German and mathematics. Additionally, the system allows no opportunity for students to change their educational plans as it allows little flexibility for students to switch between types of education (*e.g.* from technical secondary to general secondary), which may have an impact on late-maturing children or students with an immigrant background. Also unclear is the extent to which parents fully understand the consequences of the orientation process or if a relationship between their level of understanding and their educational and social status exists.

Policy makers in Luxembourg are aware of these significant challenges. Clearly, the introduction of the competency-based approach in fundamental education, coupled with requirements for teachers to regularly report on student progress (during each cycle, as well as at the end of each cycle) aims to ensure that parents are in general better informed of their child's progress. Indeed, subsequent to the OECD review a decree will see the better alignment of these elements in the orientation decision-making process as of 2012/13 (see Chapter 3).

Ability of the system to accommodate students with various linguistic backgrounds

Students whose mother tongue is different from the three national/teaching languages now represent 49.8% of the students enrolled in school, of which more than half are Portuguese speakers (25% of all students enrolled) (MENFP, 2012b). The system does offer general information and documentation for students and families whose mother tongue is different from the three national languages. But the system also needs to address these students' needs inside the classroom and provide opportunities that will support their integration into the system. Results from PISA 2009 indicate a significant performance difference in particular for students whose families originate from Portugal, the former Yugoslavia and Italy (see Chapter 1). During the OECD review, interviews with teachers and students from schools with a large majority of students with an immigrant background indicated that they face difficulties in adapting their teaching styles due to a lack of supporting materials and training, particularly for students of younger ages. Although children with an immigrant background may have the required cognitive ability in a language other than one of the three teaching languages in Luxembourg, statistics indicate these students are being denied opportunity to benefit from fundamental school, with the vast majority going towards technical education.

Confusion over the purpose of and responsibilities for evaluation and assessment

Defensive culture among educators regarding evaluation

In general, the OECD review team perceived a defensive culture among Luxembourgish teachers in which external interventions are seen as a threat and an attempt to control rather than a tool for quality development (see Chapter 4). During the OECD review, teachers and *directeurs* often expressed a perception that external evaluation only has an accountability function and does not contribute to school improvement (see Chapter 5). This is despite the MENFP's strategy to emphasise the improvement function of evaluation and assessment activities, notably via the ADQS capacity building support to schools in development planning and self-evaluation. However, educators' misgivings can be justified to a certain degree given the insufficient feedback of results from the national monitoring system to the school level (see below).

Lack of clarity on roles and responsibilities for evaluation and assessment

This may also result from a lack of clarity on the different roles and responsibilities within the evaluation and assessment framework. There may be in some cases an unwillingness to assume evaluation responsibilities, for example, although *directeurs* have the right and mission to observe and evaluate their teaching staff, they do not always exercise this. However, this may be due to the limited room for *directeurs* to act on the results of their staff evaluations, due to their lack of autonomy in this area (see Chapters 4 and 5). At the national level, the ADQS within the MENFP plays a key role in school quality improvement, but has fought to build credibility in this area, as schools are aware of its role in monitoring the school system (see Chapter 6). Further, there is room to clarify and strengthen the oversight of standardised assessment development by the MENFP (see Chapter 6).

Little use of evaluation and assessment results and weak link to classroom practice

The OECD review highlighted a significant underuse of the results available from the national monitoring system. While the major use of evaluation and assessment results appeared to be at the national policy level, there was insufficient analysis of results from national assessments for policy making (see Chapter 6). This is in contrast to significant analysis and policy development sparked off by results from international assessments (see above). At the same time, the reporting back of key results to decision makers at the school level (*directeurs*, teachers, *inspecteurs*) missed opportunities to provide valuable information for further evaluation and analysis at the school, class and student levels (see Chapters 3 and 4). There are no external incentives for schools to make use of evaluation findings and *inspecteurs* and *directeurs* lack authority to follow up on evaluation findings with staff at their schools (see Chapter 4). At the same time, much effort is invested at the national level to collect results from the non-standardised national tests (*épreuves communes*), but these are not reported at the system level or used for moderation of teacher grading of student work (see Chapter 6).

The OECD review revealed that the current evaluation and assessment activities have generally weak links to classroom practice. Notably, schools and teachers were not benefiting from the administration of national standardised tests, as they received results for their students only at a general level and after a significant time lag. The MENFP has gathered evidence in this area that indicates that the reporting of results to schools needs to be clearer and more easily understandable in order to be helpful to schools (ADQS, 2011). Importantly, the shift in student learning objectives with the new competency-based approach did not appear to have impacted the other major forms of student assessments, including regular classroom assessment and the non-standardised national tests (*épreuves communes*). At the early stage of implementation, there was also a need to strengthen school capacity to formulate and follow up their school development plans. This capacity building role has so far been undertaken by the small quality development agency (ADQS) within the MENFP. This approach of course can provide a major vehicle to strengthen the implementation and assessment of the new student learning objectives. However, "no mechanism is formally stated in the framework for evaluation and assessment as to ensure that the ensuing results do indeed improve school and classroom practice" (ADQS, 2011).

Implementing the reform of competency-based learning

While the OECD review team commends the reform to introduce competency-based student learning objectives, it notes that the implementation has not been conducted in a systematic way. Interviews during the OECD review revealed a lack of coherence among key players leading to alignment problems of key aspects of the reform. A first point relates to the development of student standardised assessments to measure standards before the student learning objectives had been developed or clearly defined. Regarding the development of the competency-based student learning objectives, there lacked an overall strategic guidance. The development process was undertaken by different groups simultaneously and did not pay adequate attention to the alignment of competencies across different levels and age groups. A major example is the lack of coherence in the competencies for a given subject between the general and technical streams of secondary education. Further, although some teachers had been engaged in working groups for competency development, this process appeared rather *ad hoc* and it was not clear to what extent this process ensured appropriate representation of key stakeholders. Without this, of course there is the risk that some stakeholders may not feel ownership of the new student learning objectives. Indeed, a prominent example of this is the fact that interviews

during the OECD review indicated that the teacher-developed national non-standardised student tests (*épreuves communes*) were not aligned to the new student learning objectives in French and German (although there are no national mechanisms in place to check on such alignment concerns) (see Chapter 3).

Policy recommendations

The OECD review team recognises that there have been concerted efforts over the past eight years to conceptualise a pivotal role for evaluation and assessment in improving school outcomes in Luxembourg. In light of the analysis of strengths and challenges, the OECD review team recommends the following to build on and consolidate these efforts:

- establish a coherent framework for evaluation and assessment with the student at its centre
- clarify roles and responsibilities for evaluation and assessment
- raise the focus on equity within the evaluation and assessment framework
- implement mechanisms to promote school use of evaluation and assessment results for improvement
- evaluate the implementation of the competency-based student learning objectives
- build evaluation and assessment capacity throughout the school system

Establish a coherent framework for evaluation and assessment with the student at its centre

Ensure that student learning objectives underpin all evaluation and assessment activities

Building on the MENFP's potential to steer evaluation and assessment activities, the OECD review team recommends that at this critical stage of implementation the MENFP devise a strategic plan to complete the evaluation and assessment framework. Of critical importance, the MENFP needs to clearly communicate to all stakeholders that the purpose of the evaluation and assessment framework is to improve student learning outcomes. There should be clear expectations that the results of evaluation and assessment activities are used to inform the improvement of teaching and learning.

An important first step in making the framework more coherent will be to adequately align the various aspects that are currently in place or being introduced. Notably, the new student learning objectives (the *socles de compétences*) should be at the heart of evaluation and assessment activities. Similarly, the OECD suggests that the MENFP develop in collaboration with key stakeholders a common definition of school quality which should also underpin all evaluation and assessment activities (see below).

- It is critical that regular formative assessment activities with students, as well as national assessments are aligned with the student learning objectives. This will entail greater collaboration among teacher representatives, test developers (EMACS and teacher groups) and the curriculum competency development teams within the MENFP. Importantly, there should be greater strategic oversight by the MENFP to ensure coherence in the development of and any necessary refinements to these key elements of the student assessment framework (see Chapter 3).

- School development plans need to adequately address the national student learning objectives, as well as other specific internal school goals (see Chapter 5).
- The national monitoring and reporting system needs to be aligned to report on progress of outcomes measured against the new student learning objectives (see Chapter 6).

Similarly, in further developing and completing the evaluation and assessment framework, the OECD review team recommends:

- developing a set of teaching standards and importantly ensuring that these are aligned with the student learning objectives (see Chapter 4)
- developing a common understanding of school quality in Luxembourg (see below)
- introducing an external review of schools to monitor the quality of teaching and learning and validate processes in place to organise developmental teacher appraisal (see Chapters 4 and 5)

Ensure greater linkages among different evaluation and assessment activities

A coherent evaluation and assessment framework would also allow the more explicit detailing of how evaluation and assessment activities at the student, teacher, school and school system level link together to ensure that these are complementary. This can include how non-standardised and standardised national tests complement each other, as well as the regular classroom assessment activities set by teachers to inform on student learning progress, and how the results from all these student assessment activities fit into school self-evaluation activities. The OECD review team commends the announcement that the formative and end-of-cycle summative reports in fundamental schooling will explicitly feed into high-stakes decisions on student orientation at the end of fundamental schooling. Such decisions should be informed by as much evidence as possible and draw on results from both national standardised and non-standardised tests in addition to documentation of teachers' ongoing assessment of the student.

There should be an explicit link or influence of school evaluation over teacher appraisal (OECD, 2009). As such, the evaluation and assessment framework should specify that school self-evaluation activities devote a central role to the appraisal of teaching quality and of individual teachers. There is room to strengthen the links between teacher appraisal, professional development and school development, including for example professional development plans in the school development plan (see Chapters 4 and 5). Further, if Luxembourg develops a career structure with key stages for teachers, then teacher appraisal should ensure links between developmental evaluation and career progression evaluation, *i.e.* appraisal for certification should take into account qualitative assessments produced through developmental appraisal.

Clarify roles and responsibilities for evaluation and assessment

In completing the evaluation and assessment framework, it will be of key importance to clarify the roles played by different stakeholders. This includes a more active role for students in assessing their own learning progress against the student learning objectives and heightened responsibility for teachers to this end in ensuring regular formative feedback to students and their parents on student learning progress (see Chapter 3).

The OECD review team strongly recommends that the MENFP recognise the important role that pedagogical leadership plays in effectively translating assessment and evaluation results to improved student learning. To this end, it is necessary to clarify the role that *directeurs* and their leadership teams in secondary schools play as pedagogical leaders. Serious reflection will be required around this issue to establish the correct balance of autonomy and responsibility for pedagogical leadership. One notable issue is the *directeurs*' current lack of ability to select and appoint teachers to match their school ethos and development requirements (see Chapter 5). Further, consideration of the OECD recommendation on establishing a mechanism for the external evaluation of schools also has serious consequences for the role that the *inspecteurs* play in fundamental schools. If an external evaluation mechanism is established, this could see a considerably strengthened role for the *inspecteurs* as providing pedagogical leadership.

Finally, within the MENFP, it would be helpful to clarify different responsibilities and to ensure greater coherence in the development of evaluation and assessment policies and tools for schools. This would entail a clear planning of different roles and responsibilities in the evaluation and assessment framework among the Department for Fundamental Education, the Department for General and Technical Secondary Education, the School Psychology and Orientation Service and the different divisions within the Department for the Co-ordination of Research in Pedagogical and Technological Innovation (SCRIPT). Such planning should pay careful consideration to current capacity and assess the need to build and develop evaluation and assessment competencies where necessary (see below). It is particularly important to clarify responsibility for oversight of the development of national standardised and non-standardised tests and to ensure that these are aligned to the student learning objectives (see Chapter 6). The MENFP could also benefit from a reflection over the distribution of responsibilities for the monitoring system, including which units are responsible for collection of evaluation information, which are responsible for conducting evaluations of policy implementation and which are responsible for analysis of the results of evaluation and assessment.

Raise the focus on equity within the evaluation and assessment framework

While the need to monitor equity is one of the stated drivers behind the initial conceptualisation of an evaluation and assessment framework in Luxembourg, the OECD review team sees a need to further raise the focus on equity within the evaluation and assessment framework. This is highlighted of course by the results of student assessments that indicate clear discrepancies in outcomes for particular student groups, notably with a strong impact of socio-economic background on student outcomes (Chapter 1).

However, it is also highlighted by the different access and pathways within the school system for different student groups. Assessment and evaluation play a key role here and it is critical to ensure that the procedures in place pay adequate attention to equity concerns. In particular, the OECD review team recommends a thorough review of the procedures in place for the orientation of students at age 11 into different types of secondary education. National and international data clearly demonstrate that the current procedures disproportionately impact certain student groups. There has been political recognition of the important role that early education plays in promoting social equity and educational access opportunities. Indeed, in 2010/11, 43.2% of children in the optional preschool year (*cycle 1 – précoce*) were non-Luxembourgish (of which 21.6% were of Portuguese background) (MENFP, 2012b). Early school programmes can help children with an immigrant background to acquire the appropriate language skills and to help them benefit from the multilingual schooling context in Luxembourg. Further evaluation and review of

how to maximise the benefits from these programmes could provide key information for policy makers. This is an area where the innovative piloting approach taken by the MENFP may also be useful to examine the benefits to complementing the traditional *Lëtzebuergesch* instruction in Cycle 1 with instruction in German and French for certain children.

Further, there is a lack of moderation of teacher grading in high-stakes student assessment (see above). Here, there is room for the MENFP to make better use of the results of both non-standardised and standardised national assessment results.

Finally, a review of the competency-based student learning objectives (see below) should examine to what extent these can be better harmonised across general and technical streams of secondary education. As it stands, the risk is that these simply follow the existing structure of the school system and miss the opportunity to promote greater flexibility for student transition among the different streams.

Implement mechanisms to promote school use of evaluation and assessment results for improvement

The results of evaluation and assessment activities must be effectively linked to classroom practice, if not their ability to inform improvement is severely limited. As stated above, there should be clear expectations that the results of evaluation and assessment activities are used by schools to inform the improvement of teaching and learning. Obvious ways of improving links to the classroom in Luxembourg include better reporting on results at the national and school levels and ensuring that evaluation and assessment activities are underpinned by a commonly understood definition of the multiple factors that feed into building, sustaining and improving school quality.

Strengthen reporting on results of evaluation and assessment to promote better links to classroom practice and school improvement plans

The OECD review team commends the decision to provide more detailed feedback reports to schools from the standardised national assessments. The MENFP should seek feedback from *directeurs* and *inspecteurs* on how the reporting of results from both non-standardised and standardised national assessments could be optimised for use in school self-evaluation activities (*e.g.* via the formal communication channels or a quick survey). Such feedback should adequately reflect the views of teachers in their respective schools. The school development plans provide strong potential to allow the regular self-evaluation of schools of their progress toward implementing national policies and ensuring students achieve the student learning objectives and also specific school goals. Schools should be required to add a section to their school development plan in which they describe how well they will implement national reforms, such as the competency-based student learning objectives, how they will align their curricula and teaching to these and how they will evaluate their implementation. Regarding the student learning objectives, school reporting against the school development plan provides the ideal platform for schools to report on student progress against these and to place their progress in the context of the school's student population, ethos and development plans. Such reporting should form the basis of each school's analysis of how to further develop the quality of its teaching and learning in the future and to evaluate its progress towards these development goals.

Develop and promote a common understanding of high quality and effective schools

The OECD review team strongly supports the development of a common understanding of high quality and effective schools in Luxembourg. Since the OECD review, the ADQS has invested efforts in developing a framework for school self-evaluation and consulting with stakeholders over this (MENFP, 2012). Indeed, the OECD review team would see a central role for key stakeholders in developing and ensuring a nationally agreed model of high quality and effective schools. This would be similar to national inspection or self-evaluation frameworks that have been developed in many European countries in as much as it would draw on international research and provide common criteria for all schools. However, it should fundamentally reflect the specific context and needs of the school system in Luxembourg, for example paying adequate attention to the key role of multilingualism. This would form the basis for all school self-evaluation activities and would clarify the central importance of assessing student learning progress against the national student learning objectives. This would also serve as a solid foundation for any external school evaluation activities.

The different aspects that contribute to school quality in Luxembourg can be drawn from analysis of national research and assessment results, professional insight from educators and pedagogical support networks, as well as the vast international literature on school effectiveness and improvement. 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.

The development of a national model for high quality and effective schools would benefit from the parallel development of professional teaching standards and the two sets of quality criteria (for teachers and for schools) should be explicitly linked.

Evaluate the implementation of the competency-based student learning objectives

The OECD review team commends the planned review of the implementation of the competency-based student learning objectives. As part of this process, it will be important to review evidence from various stakeholders (students, teachers and parents, notably). In further refining these, the OECD review team would recommend a more formal and systematic approach to the development and implementation of student learning objectives. To ensure greater engagement of teachers it would be important to ensure that teachers feel that they are partners in this process. This means that they have a representative voice and actively work toward the development of student learning objectives and related assessment tools. As part of the review, it will be important to assess the degree to which there is demand from teachers for tailored training in working with the new competency-based approach and to reflect on how the SCRIPT can meet this need. The review should also critically examine how the lack of incentive structure for schools and teachers to implement the competency-based learning objectives has impacted implementation.

Build evaluation and assessment capacity throughout the school system

The development of a coherent and effective evaluation and assessment framework necessitates considerable investment to develop evaluation and assessment capacity at the class, school and school system levels. This is particularly important in a school system such as Luxembourg where the introduction of evaluation initiatives is relatively recent and often associated with international assessments and thus perceived as "externally imposed". There have been considerable developments in evaluation and assessment activities over recent years in Luxembourg. Notably in the area of student assessment with the introduction of new formative and summative assessment tools for teachers to document student progress and the introduction of national standardised assessments to complement international assessments and national non-standardised assessments. These initiatives alone have generated ample information for teachers, parents and schools. However, the generation of information and results is not of use if these cannot be analysed, interpreted and used to improve the learning situation for students. It is, therefore, extremely important that continued and adequate attention is paid to training teachers, *directeurs* and *inspecteurs* in how to work most effectively with the results of evaluation and assessment.

In this context, the OECD review team commends the priority accorded to building school capacity for developing their strategic improvement plans and self-evaluating. Since the OECD review, the ADQS has supported every fundamental school in Luxembourg with its school development plan. This is important work and is expected to have a positive impact on the implementation of these new school self-evaluation requirements. Further, the requirements for schools to implement structures internally for school development would appear a positive signal of the high political priority given to school self-evaluation for improvement. It will be important to monitor the success of these structures and to determine the type of training and capacity building support they require. This will be a good investment to build evaluation capacity internally within schools on a more sustainable basis.

The OECD review team underlines the importance of pedagogical leadership (see above). A core component of this would be ensuring that *directeurs* and their management teams and *inspecteurs* have the evaluative training to conduct regular observation of classroom teaching and learning and to provide useful feedback to teachers to build on and further improve the quality of their teaching. There is room here also for the MENFP to monitor and evaluate the capacity of *directeurs* and *inspecteurs* to conduct their evaluation responsibilities.

Finally, a clear signal of the importance of evaluation and assessment activities is the creation of national capacity in these areas. The OECD review team has recommended that the MENFP consider establishing an external school evaluation mechanism. In any case, it is clear that the current responsibilities that fall within the ADQS need to be either redistributed within the MENFP or that the ADQS be given increased capacity. The implementation of the evaluation and assessment framework is at a critical stage and the continued prioritisation of capacity building at the school and national levels is more important than ever to ensure that the results of evaluation and assessment lead to improvements in student learning.

Notes

1. 53% of parents and 21% of teachers responded. See "*Les cycles d'apprentissage et l'évaluation*" at *http://fondamental.men.lu*.

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Chapter 3

Student assessment

Since 2009, Luxembourg has strengthened focus on the importance of student assessment by legally defining both formative assessment (assessment for learning) and summative assessment (assessment of student learning), introducing centrally defined minimum competency levels to be achieved by students and requiring teachers to document students' learning progress. These reforms have mainly impacted fundamental schooling, but also secondary schooling. The chapter presents an overview of national assessments and describes the role that student assessment plays in student progression through the school system. Based on an analysis of strengths and challenges in the current approach, the chapter presents a set of recommendations to further develop student assessment in Luxembourg's schools, including building teachers' capacity to use assessment results to improve student learning and making summative assessment procedures more equitable.

This chapter focuses on approaches to student assessment within the overall evaluation and assessment framework in Luxembourg. 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.

Context and features

A reform to strengthen the focus on student outcomes with a key role for student assessment

The OECD review visit and background documentation emphasised the integral role of student assessments in this centralised, highly stratified, multilingual and culturally diverse system (see Chapter 1). The latest educational reform in fundamental schools, which started in pilot schools (*i.e. écoles en mouvement*) in 2008, was triggered by changes to this context as well as the results from the international assessment of 15-year-old students (OECD's Programme for International Student Assessment). It was designed under the concept of "equity of opportunities" and has three priorities related to student assessment (MENFP, 2011a). First, it proposes to establish ways for schools to deal with the increasing heterogeneity of the student population and reduce the impact of social and cultural background on student learning outcomes. Second, it intends to raise the overall level of educational attainment and rates of certification by minimising dropouts. Finally, it aims to add flexibility to a heavily structured system and redefines content to ensure the attainment of minimum competencies for all students.

Within this context of improving outcomes and accounting for diversity, an assortment of assessment tools exists that includes everything from teacher tests and observations to portfolios and national assessments. These tools are used by both teachers and the system to draw inferences about students' learning for formative and summative purposes (see some examples in Table 3.1). The laws governing educational assessment from 6 July 2009 (MENFP, 2009c) define formative and summative assessments as follows:

- formative assessment takes place during the learning process and is intended to give students an opportunity to demonstrate what they are capable of by considering individual cognitive, linguistic, motor, emotional and social development;
- summative assessment occurs at the end of a cycle with certification purposes.

As the focus of testing moves from low stakes to high stakes, other aspects of the educational system will most likely also be impacted, including instructional decisions, breadth of the curriculum and content emphasis.

In December 2011, a first draft of a proposal to reform the secondary school in Luxembourg was published and is the basis for an ongoing nationwide consultation with all stakeholders[1]. This draft is the result of discussions and reflections between the MENFP and secondary school teachers on preparatory documentation that started in March 2010. The proposed reform would impact student summative assessment (*les critères de promotion*).

Centrally defined minimum competency levels for student learning

In 2009, the *Ministère de l'Éducation nationale et de la Formation professionnelle* (MENFP) defined in collaboration with teacher groups the essential competencies that students should attain by the end of each of the four cycles of fundamental education (*socles de compétences*[2]). The competency approach aims to place students at the centre of learning. The essential competencies should also guide teachers in their judgement on student progression through fundamental education, as students should attain the specified competencies at the end of a given cycle in order to be able to progress to the following cycle. The study plan (*plan d'études*[3]) includes guidance for teachers organised in three main sections: the essential competencies to be attained by students at the end of each learning cycle; performance descriptors to illustrate the attainment of each of the essential competencies, as well as recommended learning content; plus specifications for each cycle of the number of weekly and annual lessons during which specific competencies should be taught. Details are found in the education law of 26 August 2009 and are to be used to guide teaching (MENFP, 2009a). Collectively, these form the learning objectives against which student tests are designed and developed. Such "achievement standards" were introduced to secondary education in 2007 for languages and mathematics and are currently being extended to all subjects. The reform shifts from teacher-centred programmes towards student outcomes. It is centred on student learning, emphasising competencies and integrating formal and informal assessments as tools to monitor and improve learning. This approach considers learning as a continuous progression during fundamental education. The study plan also provides teachers with autonomy to adapt their teaching techniques to meet individual students' needs (MENFP, 2009a). The study plan is accompanied by a detailed guide on how to interpret and use it (MENFP, 2009b).

Documenting assessment of student learning progress

Fundamental education

With the introduction of competencies for Cycles 1 to 4 in fundamental education, there is a new system to document the assessment of student learning progress. The competencies serve as the basis for documenting and providing results to parents and others in report cards (*i.e. bilan des compétences*). Teachers will be expected to document student learning progress against the predefined end-of-cycle objectives in two ways:

- Formative reports at the end of each trimester (*bilan intermédiaire*): These reports are descriptive in nature (*i.e.* no test scores) and are designed to maintain students' motivation and facilitate parents' understanding of student progress against the predefined end-of-cycle objectives. This approach is supported by the assessment literature for less salient grading principles in elementary school (Shepard, 2006).
- Summative reports at the end of each two-year learning cycle (*bilan de fin de cycle*): These reports summarise students' performance and determine their eligibility for promotion to the next learning cycle. These establish the performance level for each student using four levels: *i)* standards attained with reserve, *ii)* standards attained, *iii)* advance level, and *iv)* level of excellence.

Both formative and summative reports were introduced into the first two cycles of fundamental education as of 2009 and will be implemented in Cycles 3 and 4 by 2012 (ADQS, 2011). These two types of assessment are integrated to support the stratification processes – referred to as orientations – that occur at various points in the education system (see below). In the case that parents disagree with the performance level noted for their child in the summative report, they have 15 days to initiate an appeal with the *inspecteur* for the school (MENFP, 2011c).

Secondary education

In secondary education, there is an established tradition of giving a report card to students at the end of each term, comprising individual scores in each subject. The academic year 2007/08 saw the piloting of a qualitative feedback sheet (*complément au bulletin*) to the students' summative report card. This aims to better document student learning progress, by giving feedback on their competency level (highly competent, competent, becoming competent, insufficient level of competency) in different skills (*e.g.* for French: writing texts; spelling/grammar; expression/vocabulary; comprehension of written text; comprehension of oral language; speaking, communicating and listening). This tool is being progressively introduced for all subjects. It is established in the tenth and eleventh years of compulsory education and was introduced in the ninth year (*i.e.* the first year of secondary education) in 2009/10. There are plans to further refine this tool by drawing up descriptors for different skills.

Main forms of student assessment

National standardised assessments

Standardised assessments at the national level occur at various points in the system to identify whether students achieve the national learning objectives; they can be either low or high stakes (see Table 3.1).

In the fifth and eleventh years of compulsory education, these assessments are intended for summative purposes at the system level and are low stakes for students. Low-stakes standardised assessments are paper based in the fifth year of fundamental education and computer-based in the eleventh year of compulsory education (Grade 5 of general secondary and Grade 9 of technical secondary education). The University of Luxembourg develops these tests through a group led by an educational psychologist with psychometric background who works with volunteer teachers, *inspecteurs* and other researchers. These assessments do not contribute to the individual grades of students and the reporting is anonymous in relation to the students, but they provide detailed information at the classroom, school and national levels. The ADQS informs the OECD review team that feedback to individual students and their parents is planned as of 2012. The content of these tests is confidential and not publicly released in order to allow comparison of results over time. However, the ADQS reports that due to increasing demand from teachers, there are plans to publicly release a few of the student test items annually, so that teachers can use these as test examples in classroom practice. An overall national report presenting an overview of average results is published (see Chapter 6).

A different type of standardised assessment is administered in the eighth year of compulsory education. Here the stakes are high for students and although all students sit tests with the same content, the content is not standardised over time and may give emphasis to different content (*e.g.* production or comprehension skills) in each subject

from year to year. Further, the difficulty level of the tests may vary from year to year. The content of the assessments is set by a working group including representatives from the MENFP, teachers and *inspecteurs*. These assessments examine French, German, and mathematics and are summative and high stakes at the student level because they are used as the basis for the orientation process at the end of fundamental education. For this reason, these are also known as *épreuves passage primaire-post-primaire (PPP)*, meaning the tests for transition from fundamental to secondary education.

National non-standardised assessments

Non-standardised tests, also known as *épreuves communes*, are administered in French and German, also in the eleventh year of compulsory education. The ADQS informs the OECD review team that subsequent to its visit non-standardised tests in natural sciences are also being piloted in selected schools. These assessments are called "common" because they cover the full population of students attending these courses in all schools and relate to the specific content of the courses. Teachers develop these tests using the national learning objectives. They are low stakes for the teachers and students, although students' results in these tests do contribute to their trimester average score. Student test performance is scored by teachers and the results are analysed by the ADQS (see Chapter 6).

Table 3.1 Major student tests in Luxembourg

Year of compulsory schooling	Subject	Standardised	Summative function	Formative function
Year 5 (first trimester of Cycle 3)	German Mathematics	Yes and comparable over time	System (student knowledge end of Cycle 2)	School Class[1]
Year 8 (end of Cycle 4)	German Mathematics French	Yes, but content and difficulty vary annually	Student (one of the criteria for orientation to secondary education)	
Year 11 (Grade 5 general secondary; Grade 9 technical secondary)	German Mathematics French	Yes and comparable over time	System (student knowledge end of Cycle 5)	School Class[1]
	French German	No	Student (contributes to the trimester average score)	System[2] School Class Student
Year 15 (Grade 1 general secondary; Grade 13 technical secondary)	All subjects	No	Student (contributes to score on the secondary school certificate)	

Notes: 1) Anonymous feedback of individual student results allows comparison of class results to school and national averages.

2) Results are collected by the Ministry, aggregated, analysed and fed back to schools.

The ADQS reports that the MENFP intends to administer the *épreuves communes* at the end of the tenth year of compulsory education (Grade 6 of general secondary and Grade 8 of technical secondary education). This will seek to align these tests with the set of nationally defined competencies that students are expected to achieve at the end of the first two years of secondary education. As such, this will provide additional evidence to inform the class council's decision of students' competency level.

Classroom-based assessments

Classroom-based assessments are also an integral part of the education system. In fundamental education they include alternative approaches such as portfolios and observations. At the secondary level, these comprise mostly assessments that follow a more traditional approach with scores of up to 60 points, with 30 or above considered passing (MENFP, 2006). These occur throughout the school year with summary grades provided each trimester. The annual score is an average of the trimester grades, but a unique aspect is that decisions on the student's progress to the next stage of schooling are not made at the subject level but across subjects – that is, low performance in one subject can be compensated by high performance in another subject. This system emphasises promotion and is recognised to be only a snapshot of students' performance rather than an account of their progress. One of its advantages is that the approach is very familiar to parents and students. The procedure in secondary education is currently under review as part of the proposed reform in secondary education.

The role of student assessment in their orientation

Transition from fundamental to secondary education

The first stratification (*i.e.* orientation) happens at the end of Cycle 4 (the eighth year of compulsory education) and is known as *passage primaire post-primaire (PPP)*, where students proceed to two main streams in secondary education: general (7ES) and technical (7ST or 7MO). Documentation about this process conveys the idea of a holistic approach that involves multiple parties in the School Orientation Council (*conseil d'orientation*), that is the *inspecteur* for the school, class teacher, and two teachers from general and technical secondary schools, and uses information from multiple sources (school reports; standardised assessments for French, German and mathematics; teachers' evaluation of the student's learning; and parents' views). Parents can also request the presence of a psychologist from the School Psychology and Orientation Service (*Centre de psychologie et d'orientation scolaires*, CPOS), although such professionals can only have an advisory role. Parents are informed of the School Orientation Council's decision and can appeal. In 2009/10, 11% of students were oriented to a less demanding type of secondary education than their parents had expected, and the reverse was the case for only 1% of students (MENFP, 2011c).

In cases of disagreement, after appeal, if students are oriented to secondary technical education but parents would like them to attend secondary general education, students will take another admission test (*examen d'admission*) during a whole day, that includes three parts: *i)* a 45-minute assessment of mathematics; *ii)* a 2-hour, 15-minute assessment of German with dictation, reading comprehension and essay; and *iii)* a 2-hour, 15-minute assessment of French with dictation, reading comprehension and essay (MENFP, 2011b). No further tests are necessary in cases of disagreement when students are oriented towards secondary modular education (referred to as 7MO) but parents would like them to attend secondary technical education (referred to as 7ST). In 2009/10, 3% of students finishing Cycle 4 sat the admission test, of which 12.5% passed and were admitted to general secondary education (MENFP, 2011c).

In the academic year 2012/13 revised procedures will come into force (Grand Duchy Decree 7 February 2012)[4]. These are designed to better align to the new competency approach with its assessment tools for regular feedback to parents via the formative reports (*bilan intermédiaire*) and summative reports at the end of each cycle (*bilan de fin*

de cycle). The decision will still draw on multiple sources of information, but with a few changes:

- The class teacher's judgement as based on the assessment of student competencies documented in the *bilan intermédiaire* and the *bilan de fin de cycle* (instead of student test scores). Specifically (Article 2 of the Decree):
  - level of competency attained by the student in the different competency domains of German, French and mathematics and documented in the *bilan de fin de cycle*;
  - evaluation of cross-cutting competencies documented in the *bilan intermédiaire* of Cycle 4.
- Student results in the national *épreuves communes* measuring student attainment of the national standards defined for the end of fundamental education (instead of results in the national standardised tests)
- Student school work that demonstrates their learning, interest and aspirations.

Consideration of the parents' view will remain important information in making the orientation decision and the new procedures will reinforce parents' access to information in forming their view. Article 4 of the Decree specifies that parents should have information on the school results documented in the *bilan de fin de cycle* and *bilan intermédiaire*, as well as their child's results in the *épreuves communes*. Importantly, parents must benefit from earlier feedback from the class teacher on their child's progress with specific reference to his or her possible pathway in secondary education (in individual discussions from the first term of the second year of Cycle 4). Similarly, parental involvement will increase in procedures for students who have not attained the competencies in Cycle 4 and who leave fundamental education at the end of Cycle 3 or before completion of Cycle 4. This concerns students who are 12 years old and who leave fundamental education to enrol in Grade 7 of the modular stream of technical secondary education (7MO). The student and his/her parent will receive a report of competencies attained in the different competency domains.

Progression through secondary education

A July 2005 law stipulates the criteria for student assessment and promotion in secondary education. Performance in German and French as well as mathematics remains the focus of the orientations at secondary level, which occur at the end of the fourth year in the secondary general track (4ES) or at the end of the third year in secondary technical (9TE, 9PO, 9PR or 9MO). For secondary general education, this orientation will guide students towards one of the seven sectors in the specialisation cycle, with access to each of these sections based on a combination of factors that includes interest and performance. For example, Section A emphasises languages, with access granted to students who passed all courses in Grade 4ES and scored an average of 38 points or higher in the yearly grades for languages, while Section B emphasises mathematics-data processing, with access granted to students who passed all courses in Grade 4ES and scored an average of 38 points or higher in mathematics, and so forth (MENFP, 2007). This orientation assumes that students are active participants in their learning process regarding their interests and future goals. The procedure for student assessment and promotion in secondary education is currently under review as part of the proposed reform in secondary education.

Strengths

Clear communication to a wider public on how recent changes affect student assessment

Educational reform takes time – time for development and implementation, time for users such as policy makers, teachers and students to become familiar with the new approach, and time for positive results to emerge. The process used by Luxembourg seems headed in the right direction. The MENFP site (*www.men.public.lu/*) represents a good source of information as it allows users access to all descriptive information, publications and reports, which is useful in a centralised system such as Luxembourg. To accommodate the country's multilingualism, the majority of information is offered in both French and German and in many cases also in Portuguese, which ensures access to a wider range of audiences. These are all very positive steps that should be linked to ensure the efficacy of the system in its ability to meet students' needs and to result in positive outcomes. Indeed, there is a specific website dedicated to the current public consultation regarding the secondary school reform (*www.reformelycee.lu/*). This includes an open blog for the public to comment on the proposed reforms.

Good initiatives to use student assessment to monitor and promote equity and support learning

The intention of using assessments as tools to monitor progress and support learning is clear and well disseminated – this is reassuring and should continue. The emphases seem to be on improving equity, increasing flexibility of educational provision and developing ways to better integrate and support foreign and lower-performing students as they enter the school system. These initiatives seem well considered and carefully documented through publications, websites and training. While the implementation of these initiatives is at an early stage, the OECD review team saw some good examples of teachers working to embed the competency approach in their instruction.

In particular, the introduction of standardised testing at the end of Cycle 4 in fundamental education is an important step in making the decision process for student transition from fundamental to secondary education more equitable. Student results in these tests are one of the criteria considered when deciding on the type of secondary education they will follow. Research highlights the importance of considering many different types of evidence that may range from a sample of students' work to observational measures, when making an important summative assessment of students (National Research Council, 2001; Koretz & Hamilton, 2006). The use of multiple sources of evidence about students' learning avoids errors from a single measure leading to incorrect decisions about a student. Second, a single test will often be considered incomplete regarding the type of educational objectives that the system is interested in considering which are often broader and go beyond the scope of traditional tests. According to Koretz and Hamilton (2006) "incorporating other sources of information could both improve the quality of information about performance and reduce the likelihood of undesirable behavioural responses".

The commitment to feed back results from national tests to schools and classes is also commendable. In theory, these provide useful evidence for *directeurs*, *inspecteurs* and teachers to feed into analysis of their instructional approaches in key areas of mathematics and languages and can lead to impact on teacher approaches to student assessment and follow up. In particular, Luxembourg is also starting to capitalise on new

technologies for student assessment: the use of computer-based tests in the eleventh year of compulsory education allows the possibility for a more rapid feedback of results to schools and teachers. This holds strong potential for their diagnostic use by teachers. Although, so far teachers have not received results for individual students, the ADQS informs the OECD review team that there are plans to feed back results to teachers for the first time in April 2012.

The shift to competencies has great potential to strengthen formative assessment practices

The recent reform places the student at the centre by shifting the focus to a competency-based approach that emphasises the formative aspect of assessments through frequent timely feedback while also providing the appropriate tools for improvement. In particular, the regular reports on student learning progress (*bilan intermédiaire*) in fundamental schools are being used to compare students' performance with the predefined end-of-cycle objectives at the end of each trimester (MENFP, 2009a). The expectation is that a more integrated use of formative assessment will lead to improvements in teaching and learning as well as outcomes (Black and William, 1998; Shepard, 2006). Article 3 of the laws governing educational assessments from 2009 consider formative assessments as an essential factor in students' motivation, self-confidence and progress as they inform students and their parents about their progress and difficulties while allowing teachers to identify weak areas and choose the best didactic approach to reach the intended educational goals (MENFP, 2009c). However, this intended purpose needs to be fully integrated into a coherent system of assessment and teaching/planning, as will be discussed later in this report.

During the OECD review, interviews with parents and students indicated high levels of motivation towards the competency approach, particularly among younger children, because they get more frequent feedback in ways that are easier to understand. Parents, in particular, felt that the competency-based approach increased motivation while minimising pressure and competition among students.

Professional development support for teachers on student assessment

Synchronisation between professional development programmes for teachers and the new approaches to teach and assess students is essential for the long-term goals of any educational reform. Teachers must understand how students learn and how to better assess each set of content. Thus, theories of learning and cognition should be integrated into professional development. In addition to addressing theory, professional development must also ensure a practical aspect that offers hands-on experience to future teachers. Teachers play a fundamental role in this context as they are responsible for implementing the required curriculum by deciding how to teach, how to assess learning and how to interpret results.

Within this context, there seem to be many initiatives to support teachers through a variety of training on how to use the competencies and how to adapt teaching methods and report results. Professional development of teachers in Luxembourg is outsourced to the University of Luxembourg following identification of priority areas by the MENFP, primarily for fundamental education, which was the focus of the latest educational reform. Additionally, the MENFP, through the Department for the Co-ordination of Research in Pedagogical and Technological Innovation (SCRIPT), offers over 1 200 professional development workshops that range from a few hours to a few days. These

are optional courses that teachers can voluntarily enrol to attend. Their topics are often developed in co-operation with *directeurs*, *inspecteurs* and teachers, but the demand for topics is often higher than can be accommodated by the programme.

This professional development support is essential because a shift to system accountability and student performance often leads to a discussion on quality instruction and increased focus on assessment outcomes. Assessments, particularly when perceived as high stakes by educators, are likely to influence instruction and student learning in unknown ways, so teachers must be deeply involved in the assessment initiatives through a sense of ownership.

Efforts to engage teachers and promote new student assessment development and use

The MENFP has various approaches to promote teacher engagement with new assessments. This includes via the development of the national standardised tests, the piloting of innovative projects in certain schools and the provision of assessment tools on line to all schools via a web-based browser.[5]

Outsourcing the development of assessment initiatives to involve a wider range of groups is positive. The development of the standardised assessments involves teachers, national researchers and education specialists from both within and outside of the MENFP, including the University of Luxembourg (ADQS, 2011). This ensures a wider understanding of the assessments' purposes, gives a better sense of ownership to those who participated and, most importantly, plays a professional development role, serving as training in these areas.

Further, the MENFP oversees different innovation projects which have either direct or indirect influence over the development of new student assessment approaches. Notably, the piloting of a student portfolio assessment approach and the pilot of extended school days offering additional opportunities for formative assessment and learning support to students.

The MENFP also provides an online assessment tool on its "My School" website. All schools can access this via a basic web-based browser. It provides an item-bank of different assessment questions and allows teachers to develop and create their own assessment questions and add these to the shared online resources.

Challenges

Lack of clarity on the purpose of different student assessment initiatives

It is apparent that Luxembourg invests in testing and centres important decisions on its outcomes. However, rather than an integrated assessment system that coherently links the purpose of each assessment to what is assessed, how it is assessed, what is reported and what decisions are made on the basis of the results, the many student assessment initiatives seem to play independent roles. The different student assessment initiatives are not linked in an integrated framework and do not involve all stakeholders.

Overall, the system lacks synchronisation regarding the purposes of the various assessments, the role of their results, and the way their information is integrated into the teaching-learning process and interpreted by the various parties. This is particularly pertinent regarding the introduction of the standardised assessments in Cycle 3 and Grade 5ES and 9EST. For example, it is difficult for teachers to accept the types of feedback

reports from the standardised assessments (*i.e.* results for student groups versus individual students) when they do not really understand the purpose of the assessment used to generate these reports. This gap will most likely impact their levels of acceptance for the results of these tests and the extent to which they are integrated into decision-making processes. According to the National Research Council (2001) in the United States, the agreement between curriculum, instruction and assessment is "a crucial one because educational assessment does not exist in isolation, but must be aligned with curriculum and instruction if it is to support learning".

A coherent assessment framework needs also to focus on a complete dissemination strategy that ensures access of information to the most appropriate parties within a proper time frame – particularly if formative information is part of the expected output. Although in theory and in documentation the various standardised assessments have good intentions and have been thought through, it seems that teachers and students are not fully informed of their purposes and therefore do not fully consider them in their planning or decision-making processes. For example, teachers seem to disagree with the student anonymity reporting approach of the standardised assessment and would prefer to receive feedback on individual student performance.

Little evidence of systematic use of formative assessments

The latest educational reform as well as the educational laws incorporated the concept of formative assessment (MENFP, 2009c). The characteristics of formative assessments have been mentioned throughout this chapter, and overall, the initiative is very positive. However, the OECD review revealed at this early stage of implementation several areas where the intended formative function of new initiatives is not currently understood and/or effectively implemented. For example, there was little evidence of the extent to which results from the interim student formative reports are used in a systematic way to guide teaching and improve learning.

Further, although some of the standardised assessments carry a formative purpose, results are not immediately available to teachers given the scoring and processing time. By the time teachers receive feedback, they may have already moved on to other parts of the curriculum, or it may be too late to provide individual remediation for students. Although of course these results could still be used by teacher groups to reflect on instructional strategies for different year groups and to make necessary adjustments for subsequent year groups, a significant delay in feedback to teachers reduces their diagnostic use for the students tested. Further, a key barrier to the optimal use of results from standardised tests by teachers is the lack of feedback on individual student performance. The anonymity aspect of the reporting scheme of standardised assessments is a barrier to the intended formative use of these results that would provide teachers with additional information to individualise instruction.

There also seems to be a need for many teachers to see formative assessment as an integrated part of their teaching and not as an additional burden. During the OECD review, conversations with teachers indicated that teachers do not feel they have enough time to interact with students on an individual basis to address these needs as there are few opportunities for a clear dialogue regarding learning. Indeed, although the concept of monitoring learning includes at its core a higher level of communication between teachers and students (*e.g.* more frequent feedback and interaction about the learning process and more opportunities for students to engage in their own learning), the OECD review team formed the impression that this aspect was not transparent in Luxembourg's schools. In

particular, the examination of documents and interviews with students in secondary education revealed that this was not the case.

National assessments signal major differences between the intended curriculum and the implemented curriculum

Documentation and interviews indicated that the education system is currently working with multiple sets of curriculum and that the intended curriculum defined by the MENFP (2009a) may differ from the implemented curriculum that teachers are emphasising in the classrooms. It seems that while the national curriculum is used to develop the standardised assessments, an alternative curriculum is used for the non-standardised assessments developed by teachers. This inconsistency adds confusion and uncertainty to the complex role and purposes of these assessments.

The primary focus of the competencies approach is on individual results that automatically encompass individual interactions and extra individual supporting time – this may be challenging in large classroom settings with limited instructional time. During the OECD review, teachers reported that the competencies were developed without considering the implemented curriculum, challenging their ability to adapt and modify their teaching methods.

According to Shepard (2006), "the content of tests – what gets tested and how it is tested – and the content of assignments that are evaluated for a grade communicate the goals of instruction to students and focus their attention and effort". The real goals of learning can only be accomplished when the content is clear and carried across from classroom activities to assessment. Curriculum cannot be viewed as an external tool and must be adopted by all constituencies of the community and implemented consistently throughout the system.

Lack of transparency on methodological practices to develop and validate student assessments

A first observation is that it was difficult for the OECD review team to access documentation on the design and methodology for the various major student assessments currently used in Luxembourg (*i.e.* the standardised assessments, the non-standardised national tests [*épreuves communes*] and the student tests at the end of secondary education).

Although the standard assessments are referred to in different publications and known across the system, methodological details about their characteristics and development process are not easily accessible. This information is essential for teachers and researchers to understand details about these assessments, such as their rationale, framework and test development processes, what and how they assess, what will be reported, and most importantly, how they can be used to assist teaching and learning. If their purpose is formative, teachers need to receive the necessary support and be allowed enough time to intervene. If these are high-stakes tests, teachers, parents and students must fully understand their characteristics and possible consequences.

The same holds true regarding guidelines for the development of non-standardised tests and student summative assessment in secondary education and approaches to ensure the validity of teacher scoring practices (see below).

Further, the OECD review revealed limited information regarding adaptation of assessment materials to students with physical or mental disabilities. Therefore, the extent to which assessment instruments are modified to meet the needs of some core groups of students with special educational needs was not apparent to the review team.

Weight of languages in student summative assessment disproportionately impacts some student groups

Throughout compulsory education in Luxembourg, languages occupy a central role, as one might expect given the overall situation in Luxembourg and the philosophy of the education system. However, due to the social characteristics of the system, this heavy emphasis on multiple languages seems to increase, rather than minimise, social inequality. Most students are not equally fluent in multiple languages, or in many cases do not speak any of these languages at home. The impact of languages is particularly challenging in summative assessments that are used for decision making, such as the first orientation before secondary education, which gives two-thirds weight to student performance in French and German. As a high-stakes decision being made to decide the student's future, this has increased inequality in access to the various tracks of secondary education (see Chapter 1). Despite the fact that two-thirds of the students will follow the technical path, during the OECD review, interviews with students and parents indicated a negative view towards technical education, with students reporting their perceptions that only low-performing and problematic students go to technical education. None indicated a desire to choose the technical path, which is surprising given the wide spectrum of offerings in secondary education. In addition to languages, it is intriguing that the only other domain emphasised is mathematics – other subjects, such as social or natural sciences, have no role in this system.

While documentation conveys the impression that student orientation at the end of fundamental education follows a holistic approach and involves multiple parties, the OECD review team formed the impression that the actual process seems to lack transparency and, in reality, seems guided primarily by students' performance in French, German and mathematics, with little input from parents. Further, although parents are allowed to appeal, there is limited flexibility because any revised decisions are based on additional student testing on the same domains of French, German and mathematics. This high emphasis on performance, primarily in languages, results in unequal access rates by social and cultural groups (see Chapter 1).

The central importance of student performance in languages in their orientation and progress through compulsory education heightens the need for teachers to be able to regularly assess individual student progress and adapt their instruction accordingly. However, there were indications during the OECD review that teachers were struggling with this challenge. For example, early education teachers (Cycle 1), whose classes included large percentages of non-Luxembourgish children, expressed frustration due to difficulties in adapting their teaching tools and methodologies to meet the needs of children who did not speak Luxembourgish.

Grading criteria are excessively prescribed by the Ministry

The MENFP stipulates the classroom grading process, leaving little room for teachers' adaptation or innovation. The latest educational reform has shifted fundamental education from a numeric grading system towards broader competencies. However, numeric grades remain the base for assessment in secondary education and are clearly

dictated by the MENFP. For example, the first two articles of the law governing the promotion of students in secondary education from 2006 clearly specify the role of the tests, the grading scale and the way to calculate trimester and yearly averages as well as which information is to be included in a report card (MENFP, 2006). While there are advantages to this detailed approach, it is also important to allow teachers some flexibility regarding how non-traditional student work such as portfolios, extracurricular activities or projects is considered in summarising an assessment of their overall performance.

Reliability of grading: a strong criterion in the decision-making process

Validity and accuracy of results should be the priority of any assessment system. Some of the national assessments (the *épreuves communes*) are scored by the classroom teacher following predetermined scoring rules. Importantly, the high-stakes tests for students – the examinations and final grades in secondary education – are scored by teachers. Reliable scoring is a necessity for high validity and comparability of results and in the absence of adequate moderation procedures implies a significant challenge to the equity of final outcomes for students. However, the OECD review team formed the impression that there is a lack of processes in place to ensure the validity of teacher grading. This is despite the fact that the importance of grading is emphasised by the laws governing education from 14 July 2005 by describing details about grading, report card, promotion, and remediation processes for secondary level (MENFP, 2006).

The key role of student self-assessment is overlooked

During the OECD review, student self-assessment opportunities were not transparent through the interviews or documentation. The OECD review team formed the impression that assessment activities were implemented from a top-down approach, without interaction or communication between teachers and students. Students did not appear to have opportunities to participate in their learning process by critiquing their own work. However, such activities are likely to contribute cognitively and motivationally to student learning and to shift student focus away from grades to the criteria and feedback used in the evaluation process (Shepard, 2006). The OECD review team saw little evidence of students setting their own learning goals, assessing their progress and planning how they will make further progress. However, without the communication and involvement of students during the planning, implementation and review of assessment activities, these may not be effectively integrated into the daily processes of teaching and learning. Indeed, since the OECD review, the results of an evaluation of the pilot project "PORTINNO" to use portfolios for student (self-) assessment highlighted the importance of the teacher approach in promoting the effective use of portfolios by students in their self-assessment, including the teacher putting the student at the centre of the learning process and being open to learning more about his/her own instructional approach (Université du Luxembourg/MENFP, 2011).

Policy recommendations

The overall initiatives of the Ministry to promote the use of assessment tools to monitor student learning, to specify learning objectives through competencies, and to ensure teacher training within the scope of the educational reforms are very reassuring aspects which are likely to result in a positive impact to student learning outcomes. The cyclic relationship created by the highly stratified educational system, the multilingual context of the country, and the high percentage of immigrants, on the other hand, seem to continue to interact to create more social inequality and unequal access to educational opportunities. With time and the involvement and efforts from all administrators, parents, and teachers, the steps taken within the latest educational reform should result in positive outcomes that better cater to all children in Luxembourg. To build on these positive steps and to ensure their successful implementation, the OECD review team recommends the following:

- establish a coherent framework for student assessment
- improve teachers' ability to effectively use student assessment results
- strengthen oversight of the development of national student assessments
- prioritise strategies to reduce the influence of languages in summative student assessment
- develop processes to increase consistency of grading in student assessments
- ensure students are actively engaged with and proficient in assessment
- ensure the necessary adaptations of standardised tests for students with special educational needs

Establish a coherent framework for student assessment

To improve stakeholder understanding and acceptance of the various student assessment initiatives, the OECD review team recommends establishing a coherent framework for current student assessments detailing:

- how the various assessment initiatives are linked
- the rationale, purpose and goals for each assessment
- the technical methodology for each assessment
- the reporting scheme and intended use of results for each assessment

Student assessment plays a fundamental role in education. It should be designed in ways that enhance and complement teaching and learning, and it can occur in two different contexts. Classroom assessments represent the most common type. They are traditionally developed by teachers primarily to support their instruction and students' learning (*i.e.* formative purposes) as well as to provide summative grading over time. The focus of classroom assessments is on the student and results are strongly related to activities inside the classroom. Their effectiveness depends on how well they are connected with instruction and curriculum. As such, they are frequently individualised, with their interpretation narrow and often limited to the classroom. Large-scale or standardised assessments, on the other hand, are used most often for accountability purposes to evaluate programmes and develop educational policies, but they are also used

as external summative assessments to re-emphasise general learning goals. These are based on a broader sample of the domain (*e.g.* mathematics) and, as a result, are less contextualised. Their results and inferences are general and more efficiently communicated at a system level over time. Because of these differences, one type of assessment will most likely not meet both of these requirements, but taken together, both are important in a comprehensive education system with the primary purpose of improving learning.

In designing a coherent framework, it is essential to emphasise the improvement dimension of student assessment. The primary aim of assessments should be "to educate and improve student performance, not merely to audit it" (Wiggins, 1998), with an emphasis on "assessment for learning" rather than "assessment of learning" (Stiggins, 2005).

It is worth noting that the information and methodologies surrounding the major student tests were not fully transparent during the OECD review visit or background documents and were not found in public documents. Therefore, a key recommendation would be to provide users with background technical information to add transparency on these initiatives. A thorough explanation and clarification of the purposes of each type of assessment and the type of inferences that can be made from the results of these will help all stakeholders to understand and work with these constructively.

Improve teachers' ability to effectively use student assessment results

The OECD review team sees considerable room to improve teachers' use of student results to better account for students' individual needs. The OECD review team commends the efforts to implement a competency-based approach. This serves as a facilitating tool that teachers can use to implement student self-assessment initiatives and create individualised development plans to accommodate each student's individual needs. Documenting individual progress and achievement while associating these with a plan to achieve well-established goals provides background for teachers and facilitates their adapting instruction to individual student needs.

In further promoting teachers' use of student assessment results, the OECD review team recommends a two-fold approach. First, there is scope to more effectively feed back the results from standardised tests to teachers. Notably, consideration should be given to providing results to teachers for their individual students. This can be done in a way that only the teachers concerned see the individual results, but it can be useful diagnostic information for them in further planning instruction for the different students in their class. Technology offers possible solutions to the confidential feedback of results to different stakeholders (teachers, school *directeurs*/*inspecteurs*). Further, providing analytical software packages for teachers so that they can easily compare results to national, school, class averages or for particular groups of students can strongly promote teacher use of the results. The feedback of results from national tests in Denmark provides an interesting example (see Box 3.1).

Second, there is room to provide targeted professional development to teachers on how to integrate assessment into their teaching within the competency approach. This can include how to use the results from the national assessments, how to communicate them to students and how to adapt their teaching methods accordingly. Further, this should also promote the use of centrally provided assessment tools on "My School" and, importantly, help stimulate the expanded use of formative assessment across the system. The ADQS informs the OECD review team that it intends to offer schools support in the interpretation and use of national test results in 2012. This offers a good opportunity to tailor such support to teacher needs and not only the interpretation of results at the school level.

Box 3.1 Denmark: Feedback of student results on national computer-based 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: Shewbridge *et al.* (2011), based on information on *http://evaluering.uvm.dk.*

Strengthen oversight of the development of national student assessments

In Luxembourg, national assessment initiatives have involved outsourcing the development of assessment to nationally recognised universities, most notably the University of Luxembourg. These projects have also involved volunteer groups of teachers and external researchers. The OECD review team commends this approach, as it is likely to increase the level of acceptance of these initiatives and provide a sense of ownership among the participating stakeholders. Essentially, stakeholder involvement can contribute to professional development as these activities will emphasise best practices regarding test development and the development of specific test questions (item writing) and add transparency to learning objectives while emphasising accuracy of content. While external involvement brings positive outcomes to the system, it is essential for the Ministry of Education to maintain full control over this process. The ADQS reports that it works in close collaboration with the University of Luxembourg and seeks to engage international expertise to contribute to the work of the teacher working groups. However, the OECD review team sees room to further strengthen oversight of national test

development. This means the co-ordination of any assessment activities, primarily regarding their overall direction, the assessment content and the most appropriate reporting methods. This will contribute to the level of accountability. It is of equal importance to ensure the systematic involvement of a balanced and representative range of other key stakeholders in the development of assessments and to avoid an approach that may be perceived as *ad hoc*. This may involve establishing an independent body with authority to advise on this and various other strategic and test development issues. For example, in the United States, the National Assessment of Educational Progress (NAEP) is the largest nationally representative group-score assessment and it examines subject matter achievement, instructional experiences, and school environment for populations of students. Although the United States Department of Education carries overall responsibility for the NAEP project and is involved in every aspect of its development, it also involves various stakeholders in the decision making and for contracting the test implementation. In particular, there is an appointed governing board that is independent from the Department of Education and sets the assessment policies, including developing the assessment framework and test specifications.[6]

Prioritise strategies to reduce the influence of languages in summative student assessment

Language skills in French and German are considered as key outcomes of Luxembourg's education system. A clear challenge in improving student outcomes in Luxembourg overall is to improve the opportunities for students who may not master French or German during fundamental education to access general secondary education. System interventions at an early age may help to compensate language deficiencies and provide better educational opportunities to students who do not speak French or German at home. Assessment plays a key role in this context: there is heightened importance for the regular diagnostic and formative assessment of student progress in French and German languages. As it stands, the impact of languages in high-stakes decisions is strong and is having a negative impact on non-Luxembourgish children or children who enter the education system late.

Accepting the strong role of languages may indicate that second language teaching and assessment should become part of the educational discussion. Although, second language learners are those that "reside in the country where the target language is spoken, meaning that they have ready access to communicative interactions in the target language in everyday life" (Chalhoub-Deville & Deville, 2006), they have different educational needs in their language development. Luxembourg should consider ways to better integrate second language learners by adapting teaching methods and the approach to assess them, but also allowing them some flexibility in choosing the teaching language, primarily for students who recently entered the education system.

Professional training and support are essential in integrating these young children into the multilingual system. It is also important to consider how ability is defined when assessing second language learning. Second language ability may extend beyond the traditional cognitive skills emphasised by reading, writing, listening and speaking. It may encompass a dynamic integrated set of competencies better demonstrated through alternative types of assessments, which may include performance-based or authentic tasks. Finally, formative assessments, continuous feedback and opportunities for self-assessments play increasing roles in second language learning as students need to be informed of their progress in order to take control of their learning process (Chalhoub-Deville & Deville, 2006; Shepard, 2006; Looney, 2011).

Develop processes to increase consistency of grading in student assessments

The OECD review team underlines the need to develop processes to increase consistency of grading in student assessments, particularly where these have high stakes for students. Consistent and reliable grading from a standardised scoring approach is essential for the validity and comparability of results. This is particularly important in Luxembourg as assessment results are being used to guide high-stakes decisions on students' access to different educational opportunities. Research supports some aspects of the current approach by Luxembourg to grading student summative assessment at the secondary level, namely the provision of detailed scoring guides (*e.g.* Harlen, 2004; Frederiksen and White, 2004). Further, with the introduction of standardised assessments, research also supports the involvement of teachers in setting scoring criteria (*e.g.* Frederiksen and White, 2004). However, what is underlined in much literature is the importance of adequate professional development opportunities and the encouragement of teacher collaboration in scoring student assessments. The latter is a major approach in Sweden, where the systematic scoring of student summative assessments is encouraged among teacher groups within a school, and also among school groups to share reciprocal scoring practices (Nusche *et al.*, 2011).

The implementation of national standardised tests and the complementary non-standardised tests (*épreuves communes*) provides an opportunity for professional development for teachers in the assessment against the national learning objectives. When scoring large-scale assessments, the traditional approach is to centralise the scoring. That is, scorers spend time together in a central location where they are trained by the same trainers and continue on to scoring all materials. In this context, the process includes detailed training on how to score each task in the assessment including its characteristics and what it measures, a full review of its scoring rubric and criteria, and illustrative exercises using sample student assessment papers to provide a benchmark for scoring. This approach results in all student assessment papers being scored by the same group of scorers.

A less conventional approach involves decentralisation or local scoring. In this alternative approach, the scoring process involves a number of local scoring centres and consequently several trainers and groups of scorers and thus, raises questions of comparability of scores coming from the various locations. This approach requires detailed evidence to indicate that the scoring procedures are comparable across locations – that is, the process must ensure and provide evidence that every scorer, independent of the location and source of training, is interpreting the scoring rules in a comparable way. A common way of collecting such evidence is through the central rescoring of a sample of student assessment papers. The purposes for rescoring are to document the degree to which the same scores are given to the same responses, regardless of the scorer and to identify where there is low consistency of scoring by different individuals on different test questions. Low consistency in scoring is referred to as "low inter-rater agreement". To ensure consistency, a rescoring operation must achieve, for example, an inter-rater agreement of at least 95%.

Within both approaches, the quality of training provided to scorers remains an essential aspect. Using only scoring rubrics will most often lead to comparability issues of the final results (Lane and Stone, 2006). The OECD review team formed the understanding that Luxembourg was applying a variation of the latter approach – decentralised scoring – where teachers scored students' responses in their own school. The OECD review team understood that detailed scoring rubrics were available to

teachers for use during scoring, but saw no evidence of specific training for scorers or any other procedures to ensure the reliability of scoring among teachers. It was also not clear whether teachers were scoring responses from their own students, or random students. As noted above, the systematic collaboration of teachers in grading student assessment is strongly recommended.

Ensure students are actively engaged with and proficient in assessment

The purpose of the formative assessments is to provide an understanding of where students are in their learning process and provide tools for improvement by "actively engaging students in their own learning processes" (Looney, 2011). In addition to assessing their level of understanding, formative assessments are important to provide students with opportunities to take responsibility for their own learning through informative and continuous feedback that are related to the learning process and offer suggestions for improvement. Formative assessments, when "effectively implemented, can do as much or more to improve student assessment than any of the most powerful instructional interventions, intensive reading instruction, one-on-one tutoring, and the like" (Shepard, 2006). In simple terms, the framework for an effective learning-assessment process should focus on where students are at a certain point as far as attaining the instructional goal in relation to where they should be, focusing on what can be done to get them there.

As the educational reform emphasises monitoring learning and providing more constant feedback, student self-assessment as well as peer-assessment activities help in integrating assessment in instruction and should be made part of the classroom activities. Additionally, this type of activity fits well within the competency-based approach that clearly identifies what is expected of each student, but these must also be part of teachers' professional development.

Integral to an assessment approach that considers formative information is the need for students and teachers to have a common understanding of the criteria and desired level of improvement needed for the student to succeed. To accomplish that, students should be given opportunities to self-monitor and criticise their work. This process contributes to the motivational and cognitive aspects of learning, increases levels of responsibility over their own learning, and creates a more co-operative teacher-student relationship (Looney, 2011; Shepard, 2006; Gipps, 1994). Self-assessment activities help in shifting students' attention from grades towards the criteria used for grading and the feedback they receive about the learning process, giving them ownership over the evaluation process.

The student must be an integral part of the learning process. As such, there must be opportunities for the student to ask questions and communicate with teachers on a one-on-one basis. It is essential for teachers to offer extra opportunities, such as during breaks or after school, for students to seek assistance and ask questions. Another way for students and teachers to interact in the teaching and learning processes is through the scoring approach for assessment tasks that involve human subjectivity – that is, questions that require students to openly develop an answer (constructed response items or performance tasks). There are two main approaches for scoring: holistically and analytically (Lane and Stone, 2006). The holistic approach of scoring summarises all aspects of the task in a single score and most often, provides summative information about student performance. The analytic approach is based on a detailed point system or checklist that assigns points to each aspect of the task. This approach plays a formative

role as it provides teachers with detailed descriptions of which area needs improvement and provides students with a clear identification of their strengths and weaknesses. The analytic approach also provides teachers with task-level information that can be used for planning future lessons or developing tasks for individual students.

In this context, the OECD review team commends recent research efforts on innovative assessment practices, as well as the pilot approaches to extend school days (*e.g.* the "PORTINNO" project and the "Eis schoul"). The OECD review team recommends the continued support for such research and, importantly, that the results are sufficiently discussed by stakeholders and fed into considerations for promoting innovation assessment practices throughout the system (see Chapter 6).

Ensure the necessary adaptations of standardised tests for students with special educational needs

The population of students with special educational needs represents an important sector of society that the education system needs to accommodate by making materials and information appropriate to their needs. In the case of assessments, the extent to which modifications or accommodations are implemented and the consequences of this are not always transparent to test developers or users. Within this context, Hollenbeck (2002) differentiates a modification – defined as "a test alteration that changes the construct being assessed" – from an accommodation – defined as a test alteration that does not change the construct by providing "students with better access to demonstrate what they know". Accommodations apply exclusively to factors extraneous to the intended measurement and can occur at the stimulus level, at the response mode level, or in most cases in both, and can range from layout to administration (Phillips & Camara, 2006). Layout accommodations may include visually modifying the instruments to facilitate understanding with enlarged font sizes or modified colours. Modifications to administration may include verbal or signed instructions or modifications to the length of testing session, but it is imperative that these are considered in the context of what is actually being assessed. For example, a reading assessment cannot be modified for vision impaired students by reading aloud the materials to students – this would change the nature of what is actually being assessed (the "construct") from a reading comprehension test to a listening comprehension test. The essential validity aspect to be considered is that any inferences made from accommodated tests must carry the same meaning as those made from standard tests (Hollenbeck, 2002).

Adaptations of assessment materials are not simple and may impact the level of inference and the way these results are comparable across populations. While it will still be possible to draw inferences regarding the students' knowledge and skills, it is important to recognise that these will deviate from the standardised approach to assessment, but that such deviation may be necessary in order to obtain accurate and valid information for all students.

Notes

1. See: *www.men.public.lu/priorites/111205_reforme_secondaire/index.html*.
2. See: *www.men.public.lu/priorites/ens_fondamental/090723_bibliotheque/111130_levels_of_competence_1_4.pdf*.
3. See: *www.men.public.lu/priorites/ens_fondamental/090723_bibliotheque/110906_plan_etudes.pdf*.
4. See the Grand Duchy decree of 7 February 2012: *www.men.public.lu/actualites/2012/02/120207_ppp_procedure_12_13/120207_rgd_nouveau_ppp.pdf*.
5. For more information, readers can see: *www.myschool.lu/home/mS/gyana.asp*.
6. The Secretary of Education appoints the 26 members of the NAEP Governing Board, comprising governors, state legislators, local and state school officials, educators, business representatives, and members of the general public. Legal responsibility for conducting the NAEP project lies within the U.S. Department of Education (the Commissioner of Education Statistics). For further details see *http://nces.ed.gov/nationsreportcard/about/*.

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Chapter 4

Teacher appraisal

Teacher appraisal is the least developed component within the Luxembourgish evaluation and assessment framework. At present there is no way of knowing the quality of pedagogy in Luxembourg since the effectiveness of classroom practice is not appraised. The chapter presents main features of the teaching profession in Luxembourg, as well as an overview of current teacher appraisal procedures, those responsible for teacher appraisal and how the results of teacher appraisal are used. Based on an analysis of strengths and challenges in the current approach, the chapter presents a set of recommendations to develop a system for teacher appraisal in Luxembourg aiming to provide feedback for improvement and to reward effective teaching.

This chapter looks at approaches to teacher appraisal within the overall evaluation and assessment framework in Luxembourg. 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 aims to ensure that teachers perform at their best to enhance student learning – the accountability function (Santiago and Benavides, 2009).

Context and features

Teacher appraisal procedures

Teacher appraisal is not regulated by law and no formal procedures exist to evaluate the performance of permanent teachers. The only existing requirement relates to the 24-month probationary period for entrants into the profession. In fundamental education, (in the absence of a school principal) the hierarchical head of the teachers is the local authority inspector (the *inspecteur*) who evaluates the teacher at the end of the probationary period and makes a recommendation about the teacher's permanent employment. The large majority of beginning teachers move onto a permanent contract as civil servants. In secondary education, the 24-month probationary period corresponds to the period of acquisition of the pedagogical training (*stage pédagogique*), and ends with an examination to access a regular teaching post. The only other occasion in which a formal appraisal is required, is when a fundamental education teacher requests a move to a teaching post in another school, in which case an appraisal is carried out by the relevant *inspecteurs*.

However, teachers are under the authority of the *inspecteurs* in fundamental education and the school principals (*directeurs*) in secondary education. This means that the *inspecteurs* in fundamental education and *directeurs* in secondary education take responsibility for the performance of teachers and have the right to inspect teachers' work. In theory this implies that teachers are to be evaluated by *inspecteurs* and *directeurs* but often this right is not exercised, also because no formal procedures exist and few consequences of teacher appraisal can be enforced.

In fundamental education, the *inspecteurs* may evaluate teachers on their own initiative with no prior notice. Given the vast range of responsibilities they have and the great number of teachers under their responsibility, the regular appraisal of all teachers is not undertaken.[1] *Inspecteurs* tend to concentrate their appraisal and feedback on beginning teachers, those teachers associated with weak student results and teachers for whom performance issues have been raised. The appraisal of a teacher typically involves classroom observation followed by an exchange between the teacher and the *inspecteur* which includes professional feedback. The main aspects assessed concern the teaching style, class management, the social climate and the quality of the content and the teaching. *Inspecteurs* also monitor the pertinence of the material taught, the ability of the teacher to follow a competencies-based approach and his/her compliance with working hour regulations.

In secondary education, the *directeur* represents the MENFP in ensuring the school is run satisfactorily and complies with national legislation. S/he takes responsibility for the school's teaching staff both ensuring its effective performance and its professional development. *Directeurs* can evaluate individual teachers, including through classroom observation and the suggestion of a professional development plan. In practice, however,

directeurs seldom undertake the appraisal of individual teachers and do not systematically provide professional feedback. Nonetheless, according to civil service regulations, *directeurs* are supposed to hold regular interviews with teachers with the aim of promoting dialogue, establishing common objectives and monitoring work achievements.

There is no guidance provided at the central level on how to evaluate teacher performance. Each *inspecteur* and *directeur* defines his/her own appraisal criteria and no appraisal framework exists. In particular, there are no shared appraisal criteria among *inspecteurs* and professional judgments are purely based on the *inspecteurs*' personal conception of quality teaching and learning.

Competencies to assess and to use feedback

The *inspecteurs* are the main source of feedback for teachers in fundamental education. Requirements to become an *inspecteur* include a minimum of five years as a teacher in fundamental education and a master's degree in a field related to fundamental education. *Inspecteurs* also need to pass a national recruitment examination (*concours de recrutement*) and be approved in their two-year induction period (*stage*). The *inspecteurs* themselves are accountable to the general *inspecteur*, but they are not appraised. In secondary education, the key role in teacher feedback is exercised by the *directeurs*. These are typically former experienced teachers who are appointed by the Minister as *directeurs* following an open competition. They do not necessarily undergo specific training for school leadership before taking up their post and have typically no training to appraise the teachers. However, as they regularly participate in examination juries to appraise beginning teachers, they generally have some experience with appraisal criteria.

Using appraisal results

In fundamental education, teacher appraisal undertaken by *inspecteurs* seeks mostly to ensure compliance with national regulations and ensure that minimum standards of performance are achieved, *i.e.* students achieve the national learning objectives. The *inspecteur*, if s/he deems it necessary, can recommend the teacher specific professional development activities so identified weaknesses are addressed. When recommendations are made, the *inspecteur* follows up on the progress by the teacher a few weeks after the original appraisal. In general terms, the feedback provided by the *inspecteur* may inform the teacher's professional development. The assessment by the *inspecteurs* has no consequences for the teacher's career or influence on pay levels. Only in extreme cases of underperformance or when teachers do not respect regulations may *inspecteurs* initiate a disciplinary procedure to remove teachers from their post. Evaluations by *inspecteurs* are also regularly transmitted to the Minister and considered as valuable feedback on the implementation of reforms and the challenges faced by teachers in their daily work.

In secondary education, little information exists about the impact of the professional feedback provided by *directeurs*. It is expected that it informs the professional development activities of the teacher, ideally in close linkage to the needs of the school and the local community, but there is little evidence that that is the case. *Directeurs* cannot formally devise consequences of their assessments, *i.e.* they cannot mandate professional development activities and there is no impact on promotions, the speed at which the teacher progresses in the career or pay levels. If an underperforming teacher is identified, the *directeur* has few mechanisms to finding a solution.

Box 4.1 The teaching profession in Luxembourg – Main features

Employment status

The vast majority of teachers working in the public sector are civil servants. In some special cases, they are salaried employees of the State either with a fixed-term contract or an indefinite contract. Pay and working conditions are governed centrally by the Ministry of National Education and Vocational Training (MENFP) and follow the general rules established for public sector workers. Teachers working in the small private sector are salaried employees of schools' organisers, which determine salaries and working conditions. As civil servants, teachers are employed on *indefinite term contracts* and can only be dismissed on very specific circumstances such as redundancy (*e.g.* due to declining enrolments), serious misconduct, imprisonment, or loss of the Luxembourgish nationality. Dismissal on the grounds of underperformance is nearly unheard of in the Luxembourgish school system.

Prerequisites to become a teacher and teacher recruitment

To obtain regular employment as a teacher in Luxembourg, individuals need to meet four requirements. First, they need a recognised qualification, which for fundamental education teachers is usually a teacher education degree offered in Luxembourg (or equivalent in a foreign country), and for secondary education teachers is usually the relevant higher education degree followed by a two-year programme in pedagogy. Second, they need to show good knowledge of the three official languages (Luxembourgish, German and French) and an appreciation of the legislation and regulations applicable to the school system. Third, they need to pass a national recruitment examination (*Concours de recrutement*). This examination consists of a number of tests in areas such as methodology and didactics, subject expertise, Luxembourgish culture, and learning planning. Finally, access to the profession is only granted if, in the national recruitment competition, the individual is ranked above a given threshold which is defined by the teacher vacancies available in the public school system. The national recruitment competition is typically organised once a year. Civil servant status can only be granted following the successful completion of a 24-month probationary period.

Teacher recruitment and appointments of teachers are the responsibility of the MENFP. The Ministry also takes responsibility for the deployment of teachers to schools, even if for fundamental education it does so following the advice of districts (*communes*). For beginning teachers, their initial teaching position depends on the available vacancies as well as the preferences they express which are more likely to be met if the teacher ranks highly in the national recruitment competition. As the teacher develops more experience, seniority becomes the main criterion for access to a teaching post.

Salary and career structure

Teaching is a flat profession in Luxembourg and there is a single salary scale essentially based on years of service. Teachers reach the top of the salary scale after 30 years of service. Salary levels are by far the highest in the OECD area. After 15 years of experience, teacher salaries in Luxembourg are 1.7, 2.4 and 2.2 times higher than the OECD average in primary, lower secondary and upper secondary education respectively (see Annex D). Opportunities for promotion and more responsibility within the teaching profession are practically inexistent. The only real promotion possibility for teachers is to become a *directeur* (or a member of the school management team) at the secondary level or an *inspecteur* at the fundamental education level. Teachers can also be seconded to the MENFP.

Box 4.1 The teaching profession in Luxembourg – Main features *(continued)*

Initial teacher education

The initial education of teachers for fundamental education follows a concurrent model – academic subjects are studied alongside educational and professional studies throughout the duration of the course. It is offered by the University of Luxembourg through its four-year *Professional Bachelor in Educational Sciences*. The initial education of teachers for secondary education follows a consecutive model – a programme of professional training in pedagogy and teaching that is taken after having completed a first degree in a discipline related to the subjects taught in schools. The professional training programme is co-ordinated by the University of Luxembourg and involves practice in schools.

Teachers' roles and responsibilities

Because of the centralised school system, teachers work in a tight regulatory environment even if the current trend is to grant greater levels of autonomy to teachers. Working hours are regulated. For instance for primary education (Cycles 2 through 4 of fundamental education), teachers are supposed to teach 23 lessons a week, provide 54 hours per year of pedagogical support, and make available 126 working hours per year in the interest of the school and students. Similar requirements exist in secondary education. Teachers follow the curriculum and use schoolbooks determined by *ad hoc* committees (*commissions de programmes*) and approved by the MENFP. They choose their teaching methods and student assessment methods.

In fundamental education, in addition to their teaching duties, teachers are part of pedagogical teams within the school (typically organised by cycle within fundamental education) and they can also be a cycle co-ordinator. Teachers can also be part of the school committee (including its president), which has responsibilities over the organisation of the work within the school (see Chapter 1). At the secondary level, similar roles exist such as subject area co-ordinator and liaison with the programmes' commissions.

Strengths

Teachers have some opportunities to receive informal feedback on their performance

In addition to feedback provided by *inspecteurs* and *directeurs*, there are some opportunities for teachers to obtain professional feedback. These typically arise out of teamwork, a prominent feature of fundamental schools. In fundamental education, the work of pedagogical teams within educational cycles provides occasions for peer learning and exchange of views and perspectives on teaching practices. Pedagogical teams typically meet every week and discuss issues such as students' learning progress, preparation of lessons and support for students, including approaches to homework. Teachers can also be part of school committees and therefore have opportunities to share responsibility for the organisation of work within the school. These arrangements greatly facilitate communication between teachers in fundamental schools. More recently the creation of the role of the special support teacher (*instituteur-ressources*), an experienced teacher working closely with the *inspecteur*, who has deep knowledge of educational sciences who is made available to a few schools to assist with their school development, creates opportunities for teachers to receive feedback from an experienced professional.

Similarly, but to a lesser extent, in secondary education teamwork within subject areas provides opportunities for peer learning. Also, each class has a teacher council that

oversees teaching and learning, student progress and discipline. There is also a body of all the teachers in the school (*Conférence des Professeurs*) which produces recommendations to the *directeur* or the MENFP on school matters. In addition, the *directeur* is expected to establish a regular dialogue with teachers, following civil service regulations.

School self-appraisal constitutes the other main opportunity for professional reflection. This is being encouraged through the preparation of the School Development Plan (PRS, *Plan de Réussite Scolaire* in fundamental education and the suggested PDS, *Plan de Développement Scolaire* in secondary education), an opportunity to reflect on teaching and learning practices and best strategies to achieve student learning objectives at the school level. It is expected that fundamental schools put in place the PRS as part of systematic work on quality improvement, including the quality of the teaching and learning. The implementation of the PRS is underway in fundamental education and the implementation of PDS on a voluntary basis started in secondary education in 2011 (see Chapter 5).

Current reforms in fundamental education are strengthening teachers' autonomy and improving the professional dialogue among teachers

A number of current reforms in the Luxembourgish education system are significantly impacting on the work of teachers. The recently introduced competencies-based approach to student learning is widening the field of action of the teachers giving them more freedom in terms of differentiated teaching strategies to address students' learning needs. It is also leading to new approaches to student assessment which seek to enhance the motivation of students. In addition, the competencies-based approach is having implications for both teachers' teamwork and the way teachers communicate with students and parents. Moreover, the development of a curriculum on the basis of competencies has involved the participation of teachers in working groups to which the Ministry and foreign experts also contribute. The reorganisation of fundamental education into four 2-year cycles is also changing the organisation of work among teachers, including opportunities for further teamwork. Finally, the introduction of national monitoring with standardised tests is raising teachers' awareness about taking responsibility for students achieving the learning objectives and goals set by the national government.

The suitable implementation of the competencies-based approach by teachers, including whether teachers understand and are familiar with the cross-curricular assessment of student skills, is also the subject of a specific appraisal of teachers' work by *inspecteurs*. As of 2009/10, *inspecteurs* are required to monitor the implementation of the reform and provide feedback on the difficulties faced by the teachers. The MENFP also regularly collects feedback from the schools through interviews and meetings in order to support and facilitate the work of the schools. This results in an additional opportunity for teachers to receive professional feedback from *inspecteurs* and the MENFP.

Interactions with inspecteurs and directeurs provide opportunities for professional feedback

Teachers are granted opportunities to engage in a professional interaction with *inspecteurs* and *directeurs* benefitting from a climate of some proximity with them. For instance, it is estimated that each *inspecteur* visits around 150 teachers per year (about 50% of the teachers under his/her responsibility). This allows teaching practices, student

results and the implementation of reforms to be discussed to the benefit of a teacher's practice. However, the different roles the *inspecteur* plays conditions the nature of the interaction with the teacher. *Inspecteurs* have a support function in assisting teachers with the improvement of their practices and guiding school development. Nonetheless, s/he also has a control function and represents the Ministry in ensuring that the law, decrees and directives are being enforced in the schools s/he manages. This includes guaranteeing teachers perform satisfactorily and parents' complaints are addressed. A similar situation occurs at the secondary level. While *directeurs* are expected to engage in a continuing dialogue with teachers, providing regular feedback for the improvement of their practice, they also represent the MENFP in ensuring the school and the teachers comply with national legislation.

A probationary period for teachers is well established

A probationary period for newly qualified teachers is well established in Luxembourg. Beginning teachers follow a two-year induction programme at the end of which they are required to pass an examination to gain access to a permanent post as a civil servant. In secondary education, beginning teachers are supervised both by professors of the University of Luxembourg (who take responsibility for the pedagogical training) and by more experienced teachers who act as their tutors. The tutor closely accompanies the work of the beginning teacher and provides individualised feedback and support. After successfully completing the induction programme, the beginning teacher must be evaluated by a 5-person jury consisting of a state commissioner, a *directeur* and three teachers. The final examination is based on two appraised lessons, a pedagogical project (*travail de candidature*), preparation of student assessment instruments and an assessment of the school legislation.

Hence, the school system does have mechanisms to identify those new recruits who struggle to perform well on the job or find that it does not meet their expectations. The formal probationary process for new teachers provides an opportunity for both new teachers and educational authorities to assess whether teaching is the right career for them. Beginning teachers have the opportunity to work in a stable and well-supported school environment, and the decision is taken following a formal appraisal. Appropriately, the successful completion of the probationary period is acknowledged as a major step in the teaching career.

There are requirements and provisions for the professional development of teachers

Teachers are required to undertake eight hours of certified professional development each school year. The MENFP organises professional development activities, determines priority areas and may establish given professional development activities as mandatory for teachers. The latter is particularly the case in fundamental education. A key role is played by a Division within the SCRIPT, the Institute for Continuing Training for Teaching and Education Staff in Schools (*Institut de formation continue du personnel enseignant et éducatif des écoles et des lycées*). It promotes, co-ordinates and organises professional development activities for teachers; provides advice to schools on their professional development plans; and certifies the professional development activities that teachers undertake. Teachers' professional development is intended to respond to teachers' individual needs as well as the needs of schools, local communities and the school system. However, as explained below, there are considerable challenges in linking teacher appraisal, professional development and school development.

Challenges

There is no profession-wide agreement on what counts as accomplished teaching

In Luxembourg, there are no teaching standards, a clear and concise statement or profile of what teachers are expected to know and be able to do. There are no performance criteria and a reference against which teachers are appraised. For instance, in fundamental education, *inspecteurs* do not use a common set of appraisal criteria and rely on their own concept of accomplished teaching and learning. 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, 2005). The absence of teaching standards weakens the capacity for the school system to effectively assess teacher performance, including in the professional interactions established with *inspecteurs* and *directeurs*. Teaching standards are a key element in any teacher appraisal system as they provide the credible reference for making judgments about teacher competence. In addition, there is a lack of agreed procedures and instruments to appraise the performance of teachers so standards of reliability, validity and fairness can be met.

Teacher appraisal is incipient and plays little role in improving teaching practices

The appraisal of permanent teachers is an incipient practice in Luxembourg. Newly qualified teachers undergo a 2-year induction programme which concludes with a thorough appraisal of their performance to gain access to a permanent position. However, following such probationary process, there is no expectation that each teacher has his or her practice appraised and receives feedback for improvement. According to the PISA 2009 survey, the following proportion of Luxembourgish 15-year-old students are in schools where the *directeur* reported the following methods were used the previous year to monitor the practice of teachers at their school: *i)* Principal or senior staff observations of classes, 53.9% (against an OECD average of 68.9%); *ii)* Teacher peer review, 38.0% (against an OECD average of 56.8%); and *iii)* Observation of classes by persons external to the school, 10.0% (against an OECD average of 28.3%) (see Annex D). In addition, according to the same survey, only 8.0% of Luxembourgish 15-year-old students are in schools where the *directeur* reported that student achievement data are used in the evaluation of teachers' performance (lowest figure among OECD countries, against an average of 44.2%, see Annex D).

The existing teacher appraisal practices are the initiative of individual *inspecteurs* and *directeurs* and depend essentially on their availability, the importance they confer to teacher appraisal and the evaluation ethos created in schools. As such, there is great variation between schools in the way teacher appraisal and feedback is conceptualised and carried out. The OECD review team gained the impression that in most instances there is a very light touch to it but there are cases of more elaborate processes, including classroom observation and peer feedback. Given their wide responsibilities, *inspecteurs* and *directeurs* have little time to perform classroom observation and to engage in a closer analysis of teacher performance. This is reinforced by small leadership teams in schools. Therefore there are no guarantees in Luxembourgish schools that approaches to teacher appraisal and feedback are addressing the real issues and complexities of teaching and learning and contributing to the improvement of teaching practices. 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 there is no systematic means to identify and address underperformance. In

addition, a limited focus on teacher appraisal runs the risk of sending teachers an implicit message that their work is not important.

Teacher appraisal is perceived as a threat rather than an opportunity for improvement

In general, there seems to be an issue about how teacher appraisal is perceived by teachers. The OECD review team perceived a defensive culture among Luxembourgish teachers in which external interventions are seen as a threat and an attempt to control rather than a tool for quality development. In part, this reading might result from the fact that visits by *inspecteurs* are most frequently triggered by either the identification of problems or complaints by parents.

In addition, the OECD review team did not have the perception that Luxembourgish teachers are generally eager and willing to receive feedback. Teachers clearly did not convey to the OECD review team that they appreciated the time the *inspecteur* or *directeur* took to visit their classrooms or provide them with feedback. This might be partly explained by teachers' concern that an appraisal could be associated with performance rewards, including pay levels. However, it also relates to the lack of culture for sharing classroom practice, especially at the upper secondary level. Once tenure is obtained, teaching practices remain largely unexamined for the teacher's working life.

There are few instruments to provide formal recognition to teachers

Teacher appraisal at the school level is not perceived as a mechanism to reward teachers. For instance, accomplished teaching is not rewarded with either monetary or non-monetary rewards. Time allowances, sabbatical periods, opportunities for school-based research, support for post-graduate study, or opportunities for in-service education are not established in Luxembourg as instruments to provide formal recognition to teachers. Also, the principle of associating good performance to career progression is not in place in Luxembourg.

Teachers could benefit from more pedagogical leadership

In Luxembourg, instructional leadership in schools is not a system-wide expectation. At the secondary level, *directeurs* do not have to undergo specific training for school leadership and the specific career of school leader does not exist. Most of those currently responsible for schools developed competencies on the job. The OECD review team gained the impression that *directeurs* are overwhelmed with tasks at the schools and, in general, they do not seem to have the time to engage properly in the coaching, monitoring and appraisal of teachers. The result is that schools tend to be administered rather than led. In fundamental education, each *inspecteur* oversees all the schools in his/her district (*arrondissement*) – in some cases, more than ten schools – and assumes a range of roles notably ensuring compliance with national regulations. This considerably limits their capacity to engage in instructional leadership.

There are missing links between teacher appraisal, professional development and school development

The OECD review team formed the view that the provision of professional development is not thoroughly planned, fragmented and not systematically linked to teacher appraisal (or, more precisely, to the professional interactions between teachers

and *inspecteurs* and *directeurs*). In most cases professional development activities undertaken by teachers do not derive from an assessment of needs made through teacher appraisal. Without a clear link to professional development opportunities, appraisal practices are not sufficient to improve teacher performance, and as a result, often become 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).

There is also scope to better link professional development to school development. In our view, school development could better explore its links to the appraisal of teaching practice. This is in part due to the limited time *inspecteurs* and *directeurs* have for instructional leadership and the limited extent to which professional development activities are linked to the results of teacher appraisal. But it also results of the fact that professional development activities are mostly an individual choice of the teacher which is often not associated with school development needs. As a recent development, the role of the special support teacher (*instituteur-ressources*), as an expert in teaching practices, might bring improvements to the co-ordination of professional development within schools.

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

There does not seem to be a formal career path for effective teachers. The role of *inspecteur* or *directeur* is not regarded as a major step in the teaching career and no other steps exist. There are few opportunities for promotion, greater recognition and more responsibility. These involve cycle co-ordinator and member of the school committee in fundamental schools and head of department in secondary education. However, such roles are not formally recognised in the teaching career. This is likely to undermine the potentially powerful links between teacher appraisal, professional development and career development.

Policy recommendations

Meaningful teacher evaluation, which is understood as an accurate appraisal of the effectiveness of teaching, its strengths and areas for development, followed by feedback, coaching, support and opportunities for professional development, is central to improve the effectiveness of teaching and learning and raise educational performance. It is also essential to celebrate, recognise and reward the work of teachers.

The autonomy of permanent teachers in Luxembourg needs to be properly balanced by accountability for the quality of the service provided if it is to be consistent with the usual concept of autonomy within a public service. At present there is no way of knowing the quality of pedagogy in Luxembourg since the effectiveness of classroom practice is not appraised. Luxembourg's performance in international comparisons of student outcomes suggests that much can be done to improve the effectiveness of teaching and learning, since the country does not suffer from teacher shortages[2] or other significant inadequacies of infrastructure. This is also important in light of the substantial investment the education system makes on teachers. In Luxembourg, teachers' salaries are by far the highest in the OECD area and the compensation of teachers takes a large share of current expenditure on pre-tertiary education (75.1%, the third highest figure in the OECD area, against an OECD average of 63.8%) (see Annex D).

In order to make teacher appraisal more effective in Luxembourg, the OECD review team proposes the following approach:

- develop teaching standards and align them with student learning objectives
- create a career structure with key stages
- introduce a system of teacher certification to determine career progression
- establish a school-based component predominantly dedicated to developmental evaluation
- ensure links between developmental evaluation and career progression evaluation
- reinforce the instructional leadership of the *inspecteurs* and *directeurs*
- strengthen the links between teacher appraisal, professional development and school development
- articulate 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 and align them with student learning objectives

A national 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 Luxembourg. The preparation of a profile of teacher competencies should be based on the national student learning 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. The development of teaching standards could benefit from the expertise gained in developing the learning objectives and descriptions of related skills for students.

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' roles 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. Clear, well-structured and widely supported teaching standards can be a powerful mechanism for aligning the various elements involved in developing teachers' knowledge and skills (OECD, 2005).

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 held 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 judgment" 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).

The work of a teacher involves considerably more than the instructional activities associated with student learning. It is therefore appropriate that teacher standards consider professional responsibilities less directly related to the teaching itself. This recognises the fact that the demands on schools and teachers are becoming more complex and teachers have their areas of responsibility broadened. Some examples are: working and planning in teams; projects between schools; management and shared leadership; providing professional advice to parents; building community partnerships for learning; and participation in professional development (OECD, 2005).

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 Luxembourg 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. In most organisations, increased seniority or promotion bring increased responsibility and more demanding leadership and management roles. 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, established teacher; and accomplished/expert teacher. It could be a mostly school-based process led by the teacher's hierarchical superior (*inspecteur* or *directeur*) 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. The latter would seek to ensure the fairness of appraisals across schools. The formal appraisal could partly build on the experience gained in organising the examination to access a permanent post as a civil servant at the end of the probationary period. The completion of the probationary period could correspond to the access of the first stage in the career as "competent teacher".

Teacher appraisal for certification would have as its main purposes holding teachers accountable for their practice, determining advancement in the career, and informing the professional development plan of the teacher. This approach would convey the message that reaching high standards of performance is the main road to career advancement in the profession. It would also permit the identification of underperforming teachers and propose ways to address their shortcomings. 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 to a promotion.

Reference criteria

The appraisal system associated with the certification process should be founded on the national framework of teaching standards. It is also important that teacher appraisal for certification takes account of the school context, and includes the views of the school leader. Schools have to respond to different needs depending on the local context and face different circumstances. Hence it is desirable that an individual teacher is evaluated against reference standards with criteria that account for the 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. Teaching practices and evidence of learning are above all 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. 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 work of the teacher.

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.[3] 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 initial teacher education. The expectation is that teachers engaging in reflective practice, studying their own methods of instruction and assessment, and sharing their experience with their peers in schools, becomes a routine part of professional life. 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, including passing the probationary period. 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, 2005). The evidence of the overall impact of bonus pay can be contentious and potentially divisive (OECD, 2005). It is also important that appraisal for certification informs the professional development plan for the teacher.

Establish a school-based component predominantly dedicated to developmental evaluation

The OECD review team recommends a stronger focus 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.[4]

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 leader (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 leader and experienced peers. The key aspect is that it should result in a meaningful report with recommendations for professional development. This developmental appraisal could build on identified best practices of current interactions of teachers with *inspecteurs* and *directeurs* but would need to be more formalised.

There are advantages to having the *inspecteur* or *directeur* 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 the *inspecteurs* or *directeurs* to undertake the thorough assessment of each teacher in the school. In addition, most of these professionals 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 appraisal functions within the school. The role of the special support teacher (*instituteur-ressources*) could be particularly relevant in developing such capacity.

In order to guarantee the systematic and coherent application of developmental evaluation across schools in Luxembourg, it would be important to undertake the external validation of the respective school processes. Therefore, considerations to introduce an external element to school evaluation (see Chapter 5) should include the audit of the processes in place to organise developmental evaluation, holding either the *inspecteur* or the *directeur* accountable as necessary.

Ensure links between developmental evaluation and career progression evaluation

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 the instructional leadership of the inspecteurs and directeurs

School leadership and management arrangements are crucially important to the effective implementation of teacher appraisal. 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 the *inspecteurs* and *directeurs* take direct responsibility for exerting instructional leadership and for assuming the quality of education in their schools. *Inspecteurs* and *directeurs* 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 a culture where teacher appraisal is indispensable to teacher and school policies (Heneman *et al.*, 2007; Robinson, 2007; Pont *et al.*, 2008).

Therefore the recruitment, initial preparation, professional development and evaluation of school leaders should be given great importance. In Luxembourg, this reinforces the case for rethinking school leadership in fundamental education so each school benefits from a dedicated leadership team. In addition, school leaders need to spend appropriate time on their instructional role. Also, it is our view that the concept of shared leadership needs to be more firmly embedded in schools, to support existing leaders and allow them to concentrate on their instructional role. At the present moment, *inspecteurs* and *directeurs* generally need better personnel support, and better training in human resource management, including teacher appraisal. School leaders need to build teams and distribute leadership responsibility to others, particularly their deputies, heads of department, cycle co-ordinators and senior teachers, all of whom should be pedagogical leaders and role models in their own right. Skilled leaders can help foster a sense of ownership and purpose in the way that teachers approach their job, provide professional autonomy to teachers and help teachers achieve job satisfaction and continue to develop professionally (OECD, 2005).

The ability to appraise effective practice is so crucial to their role that school leaders should have priority in the training provided for teacher appraisal. An offer targeted at school leaders could focus on human resources development and school quality assurance, including school self-evaluation. This would involve personnel management, including aspects such as structured interactions with teachers, setting of objectives, linking school objectives to personnel development plans, making use of various sources of information on teaching quality, development of instruments, and strategies to use appraisal results. It would cover both the aspects dealing with developmental appraisal and those involved with appraisal for certification. It would also seem beneficial to extend this training to other members of the school management team with a view to concentrate responsibility for the development of expertise on teacher appraisal within the school on this particular group.

Strengthen the links 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. Schools should have autonomy to determine how teacher appraisal results feed into teacher professional and school development plans. School instructional leadership plays the key role in ensuring the effectiveness of this link. Another key element is the resources made available for professional and school development.

Articulate school evaluation and teacher appraisal

Analysis from TALIS (OECD, 2009) 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, 2009). Given the prominence of school self-evaluation in Luxembourg, it is important to ensure the centrality of the appraisal of teaching quality and the appraisal of individual teachers within this exercise. 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. Further, any considerations to introduce an external review of schools (see Chapter 5) should comprise the monitoring of the quality of teaching and learning and also, as indicated above, the external validation of the processes in place to organise developmental appraisal.

Notes

1. In Luxembourg, there are 21 inspectors who have each approximately 320 teachers under their responsibility.

2. The ratio of students to teaching staff is particularly favourable in Luxembourg. It is the second lowest in the OECD area in secondary education at 9.1 (against an OECD average of 13.7) and the 6th lowest in primary education at 12.1 (against an OECD average of 16.4) (see Annex D).

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

4. Combining both the improvement and accountability functions into a single teacher evaluation process raises difficult challenges. When the evaluation is oriented towards the improvement of practice within schools, teachers are typically open to reveal their weaknesses, in the expectation that conveying that information will lead to more effective decisions on developmental needs and training. However, when teachers are confronted with potential consequences of evaluation on their career and salary, the inclination to reveal weak aspects of performance is reduced, *i.e.* the improvement function is jeopardised.

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Chapter 5

School evaluation

The evaluation of individual schools constitutes a key element of the evaluation and assessment framework in Luxembourg. The focus lies on school self-evaluation and strong national requirements and support have been put in place in recent years to drive this, particularly in fundamental schools. A number of initiatives have been taken that have the potential of contributing to a strong improvement-oriented school evaluation in which local decision making in schools is enhanced. Based on an analysis of strengths and challenges in the current approach to school evaluation, the chapter presents a set of recommendations to further develop and strengthen the evaluation in and of Luxembourg's schools, including the introduction of an external school evaluation mechanism.

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

Context and features

The evaluation of individual schools constitutes a key element of the evaluation and assessment framework in Luxembourg. In Luxembourg the focus lies on internal evaluations of schools, but strong national requirements and support have been put in place in recent years that drive these internal evaluations. National standardised student assessments have also been implemented and these are designed to provide results to both fundamental and secondary schools which are useful data for the analysis of school performance as a basis for improvement. These requirements and support systems are most prominent in fundamental schools, but are being introduced to secondary schools.

The components of school evaluation in Luxembourg

School evaluation in Luxembourg includes five major elements that were developed over the past years and are currently still being implemented and refined, particularly in secondary education (see Table 5.1).

Table 5.1 Implementation of major elements of school evaluation in Luxembourg

	Fundamental schools	Secondary schools
Competency-based school reform defining student learning objectives ("standards")	2009 – four sets of student learning objectives for pedagogical Cycles 1 to 4 (each cycle is two years)	2007 – French and German (first two years of general and technical secondary education) 2008 – Mathematics (first four years of general and technical secondary education) 2009 – being progressively introduced to different subjects and year levels[2]
National standardised student achievement tests (German, Mathematics and French)	Cycle 3 (first trimester)[1] Cycle 4 (end)	Third year of secondary education (first trimester)
Internal evaluation responsibilities	*Inspecteurs*	School principals (*Directeurs*)
School development plans	Schools must set and evaluate goals every four years	Recommended from 2011 (most schools starting to set goals and action plans)
Requirements to implement internal structures for co-operative school development	School committee Cycle co-ordinators Pedagogical team co-ordinator	From 2011, a School Development Unit (established in most schools)

Notes: 1) Tests are conducted in German and mathematics only.

2) All available competency-based learning objectives for general and technical secondary education can be found on the Ministry's website *www.men.public.lu/publications/postprimaire/socles_de_competences/index.html*.

These elements (standards, standardised student tests, internal evaluation, school development plans and new internal structures) are designed so that together they constitute a school internal quality assurance system in which evaluation criteria are drawn up, evaluative information and data are collected and evaluation findings are used for school improvement.

For fundamental schools, the school development plan and the competency-based school reform together set the criteria to address in evaluating their performance. The actual evaluation of these criteria is provided for in the school development plan and through the functioning of the local authority inspector (*inspecteur*) who supervises the school (as there are no school principals in fundamental schools) and, within the school, the school committee. The national standardised student achievement tests provide schools with structured performance data. The restructuring of the internal organisation of schools should contribute to the use of evaluation findings and to the further development of the school (see below).

The framework for evaluation of schools in secondary education is less well developed. Secondary school principals (*directeurs*) are entitled (and expected) to evaluate and inspect teachers in their school. Starting in 2011, it is recommended that secondary schools have and implement a school development plan and most secondary schools are staring to set goals and action plans, but the school development plan is not compulsory. Further, as of September 2011, secondary schools are obliged to establish a School Development Unit (*Cellule de Développement Scolaire*). Units typically have three to ten members, comprising the school management and teachers with an advisory and co-ordinating role with respect to school development. Similar to fundamental schools, the Ministry of National Education and Vocational Training (MENFP) started to implement competency-based student learning objectives (see below).

Competency-based school reform

Competency-based student learning objectives were first introduced in 2007 for the first two years of secondary schools (*Cycle Inférieur*) in French and German. Student learning objectives for mathematics followed in 2008 for the first four years of secondary education and the MENFP continues to progressively introduce learning objectives in other subjects and at different year levels and tracks in secondary education. In the academic year 2009/10 these were set for the first two years of both general and technical secondary education in six subjects (French, German, mathematics, art, sport and sciences). These will be completed for all subjects during 2012.

In 2009, the MENFP (in collaboration with teachers and *inspecteurs*), developed national student learning objectives and competency levels of students for the four cycles of fundamental schools. The learning objectives include, for each cycle and subject, what students should achieve in order to be promoted to the next cycle.

The learning objectives are expected to address the high incidence of grade repetition in fundamental schools and to promote the equality of opportunities for all students, improve the skill levels of students and increase students' motivation to learn. The student learning objectives and levels also include a description of the curriculum, the skills to be developed, and learning content that schools and teachers can use. However, schools may decide on the teaching materials and instruction methods to implement the student learning objectives and, in general, schools have chosen to adopt their own curricula and programmes.

School development plan requirement for fundamental schools

The MENFP aims to strengthen evaluation and local decision making in schools to improve the quality of teaching and learning. The 2009 law for fundamental schools obliges school committees to write and implement a school development plan every four years in which they describe their strong and weak points, define the goals they want to

achieve, identify the means to achieve these goals and evaluate the progress they are making in achieving these goals. The school development plan is made up of a pre-defined standard form designed by the Agency for the Development of Quality in Schools (ADQS, a division within the MENFP). Schools are required to define two to five goals related to either "the organisation of teaching and learning", or "living in the community". Implementation was swift with approximately a third of the fundamental schools having already written a school development plan in 2010, and all other fundamental schools doing so in 2011. The ADQS accompanies schools in their school development planning by offering data, assessment tools, advice, training and analytical expertise and analysing data.

The school development plan is subject to the recommendation of the *inspecteur*, the agreement of the parents and the approval of the MENFP and the local district authority. There is no external evaluation to measure the extent to which fundamental schools implement their school development plan and they face no consequences for failing to implement the school development plan. The implementation of the school development plan should, however, be annually evaluated by the school team. This implies reviewing the achievement of annual school objectives and adapting those to be implemented in the following year. The *inspecteurs* assist the school's pedagogical team during this phase, plus methodological support and training are offered throughout the process by the ADQS and the Institute for Continuing Training of all School Personnel (IFC) within the SCRIPT to help schools follow up their plans. A final evaluation after four years should include a discussion with all partners of the school on the extent to which the original objectives of the school development plan have been reached. The school is also strongly encouraged (although not obliged) to inform the society (particularly the parents) on the implementation of the school development plan, for example through a forum discussion or through the website of the school.

Schools in secondary education are not required to implement a school development plan, but the MENFP has strongly encouraged them to do so since 2011. The ADQS reports that as at early 2012, two-thirds of secondary schools have defined and are implementing annual school action plans aiming for school development.

Restructuring of internal organisation of fundamental schools

The MENFP requires fundamental schools to adapt their internal organisation and structure to enable co-operative school improvement, needed to implement the school development plan. They are expected to instate a school committee, cycle co-ordinators and a co-ordinator of the pedagogical team. The school committee consists of three to nine members, including at least two-thirds of teachers who are elected by and amongst the school staff. The school committee is responsible for the daily management of the school; it develops lesson plans, approves the teaching materials and is responsible for the school development plan. The school committee is chaired by a president who is elected by the school teachers for a period of five years and appointed by the Minister. The president of the school committee is expected to co-ordinate the writing and implementation of the school development plan.

Fundamental schools organise their teaching in four learning cycles of two years; the first cycle is part of pre-school. Each cycle should be co-ordinated by a teacher. The pedagogical team consists of teachers of one cycle; these teachers may also be co-ordinators of one cycle. The pedagogical team meets every week to discuss ongoing matters related to pedagogical questions, teaching methods and progress of individual students.

The pedagogical teams are chaired by a co-ordinator who is nominated by the pedagogical team and is responsible for organising and running the meetings. The co-ordinator may be partially discharged from his/her teaching task.

Feedback of student performance results to schools

The ADQS within the MENFP sees itself as "a partner to develop quality in schools and provides the necessary data to assist in policy making" (ADQS, 2011). The current emphasis is clearly on the use of results by schools for their own evaluation and analysis. The MENFP does not publish rankings of school performance results. Mechanisms are in place to provide schools with comparative performance results from both the standardised and non-standardised national tests.

National standardised tests (épreuves standardisées)

Over recent years, the MENFP commissioned the University of Luxembourg to develop national standardised tests. These measure student achievement against the national student learning objectives and competency levels at the start of Cycle 3 and the end of Cycle 4 in fundamental schools, and the third year of secondary education (fifth grade in general secondary and ninth grade in technical secondary). The test in fundamental schools was not administered in 2009/10 when the competency-based school reform came into effect. This was to avoid over-burdening the teachers who were facing the challenge of implementing the newly introduced reform.

The University of Luxembourg provides teachers with a report in which the overall performance of their students on the national standardised test is described on all the measured student learning objectives compared to proficiency of all the students in their school and in the entire country (corrected for the socio-economic background of students). These reports do not identify individual students but only show the distribution of students' scores on the test in the different subjects. The *directeurs* and *inspecteurs* are provided with an overview (school level) of the results of all the students in their school in the different subjects.

The University of Luxembourg and the MENFP support schools in using the standardised assessments to draw up and follow-up their school development plan; they constantly improve their technical and organisational infrastructure, for example, to analyse and interpret data and provide schools with feedback. However, at this stage there are no mechanisms in place to ensure that the results on the standardised assessments are used by schools to improve school and classroom practice.

Non-standardised tests (épreuves communes)

In secondary education, teachers currently administer a national non-standardised test in French and mathematics in the third year of secondary education (see Chapter 3). The test is developed by teachers who are part of a national committee and are based on the school curricula; these curricula should reflect the national student learning objectives (but they often do not). The results of the national non-standardised tests are also compiled and analysed by the ADQS. Schools receive summary reports with national, school, class and individual results. Schools receive their own results for comparison with other levels.

Responsibilities for school evaluation

In fundamental schools, the MENFP appoints *inspecteurs* to act as an intermediary between the school and the MENFP. They are the hierarchical superior of the teachers in the schools in their district and they combine administrative tasks (*e.g.* making sure that schools abide to official regulations, co-ordinating actions of the school committee presidents, etc.) and evaluative tasks of all the schools in their district. *Inspecteurs* are responsible for ensuring that legislation, decrees and directives are executed in schools and educational reforms are implemented. As fundamental schools in Luxembourg have no school leader, the *inspecteurs* are also responsible for and involved in the daily management and functioning of schools. For example, they counsel teachers in pedagogical matters and mediate between teachers and parents in case of serious problems with students or serious complaints from parents.

The evaluative tasks of *inspecteurs* include the evaluation of schools in their local education authority (*arrondissement*) and providing schools with feedback on the quality of teaching and learning in the school; *inspecteurs* also evaluate teachers when they want to transfer to another school. *Inspecteurs* have no nationally established standards, evaluation protocols and reporting guidelines in place for their evaluative work in schools.

Each secondary school has a school principal (*directeur*) who is considered to be external to the school staff (even though he/she is located in the school). The *directeur* has administrative and management duties and is responsible for monitoring lessons, controlling the implementation of the curriculum and inspecting school teachers. However, these evaluations and inspections are not done systematically, except for new teachers who are subject to an intensive two-year appraisal period and are obliged to have regular interviews with the *directeur*.

External assessment of secondary schools only includes overseeing the use of human and financial resources by the MENFP. Secondary schools are required prior to the start of each school year to submit to the MENFP a set of tables (the "*contingent*" report) including information on student and class enrolment, the number and organisation of teaching lessons, number of hours allocated for student support, detailed scheduling for other school and extracurricular activities and number of school staff by qualification and employment status.

Capacity for school evaluation

The capacity to evaluate fundamental schools strongly relies on the expertise and available time of the *inspecteurs* and pedagogical team co-ordinators, and the infrastructure they put in place to carry out evaluations and act on evaluation results. As both the *inspecteurs* and pedagogical team co-ordinators have a teaching background and no formal training in building evaluation and quality assurance structures in schools, their expertise is relatively limited for carrying out these demanding tasks. There are also no formal requirements or professional job descriptions in place that require them to acquire such expertise. As *inspecteurs* are responsible for a vast amount of schools, ranging from five to ten schools per *inspecteur*, their time to carry out evaluations and develop evaluative structures in schools is also extremely limited. The amount of time pedagogical team co-ordinators are discharged from their teaching task (this varies according to the size of the school) is also limited to leave sufficient time to take up any evaluation task or responsibility.

In secondary schools, the *directeurs* are first and foremost responsible for the evaluation of their schools. The fact that they are, compared to their counterparts in fundamental education, only responsible for the evaluation of their own school should provide them with sufficient time to set up structures and methods for the evaluation of their school. However, as *directeurs* lack formal training in school evaluation, their capacity to evaluate their schools is also limited. Further, they do not have to meet any formal requirements or obligations to have or acquire such evaluation expertise.

As there is limited evaluation capacity in schools, a central agency was established in 2009 (ADQS) to provide schools with evaluative information and to support schools in acting on this information. The capacity of the ADQS to perform these tasks is of key importance. However, the relatively small size of the ADQS (ten full-time and two part-time employees), combined with the breadth of their tasks and responsibilities provides a challenging setting and currently limits their capacity to compensate for the lack of evaluation capacity in schools.

Strengths

The framework for school evaluation in Luxembourg is developing rapidly, particularly in fundamental schools. A number of initiatives have been taken that have the potential of contributing to a strong improvement-oriented school evaluation in which local decision making in schools is enhanced.

Strong central steering of and support to school self-evaluation

A strength of school evaluation in Luxembourg is the strong central steering and support of school self-evaluation and school development planning by the MENFP. The ADQS plays a key role in building school capacity to work with the results for evaluations. The requirement of the MENFP for schools to renew their school development plan every four years is expected to enhance frequent self-evaluation in and improvement of schools and prevent once-off or snapshot evaluations of schools. The central steering and support of this ongoing goal setting and evaluation of goals is expected to create a climate in schools for sharing of evaluation findings and strategising about the use of evaluation findings from the very beginning of the evaluation. Continuous central steering and strong support of school self-evaluations has the potential to ultimately lead to school staff internalising quality standards and applying these to themselves when conducting internal evaluations. The specific, targeted training programmes (such as the ones organised by the ADQS) have the capacity to promote buy-in of teachers to conduct these evaluations and to improve their capacity to act on evaluation findings.

The small scale of the school system in Luxembourg allows close ties between the MENFP, *inspecteurs* and schools which enables a strong coupling and adaptation of education national policy to the specific needs of schools.

The first steps in providing information for school self-evaluation

There have been considerable efforts by the MENFP to stimulate an information-rich environment for schools' self-evaluation. The gradual implementation of student learning objectives as part of the competency-based school reform provides schools and teachers with a basis to judge the progress of student learning development. Notably, efforts to measure student performance against these student learning objectives at key stages in

core subjects (French, German and mathematics) and to provide feedback of results to schools are commendable. Further, there is commitment to collect and compile information on the non-standardised national tests and to feed back comparative results to schools for their own internal use. This signals the importance of a focus on outcomes and should prove to be an effective way to stimulate school self-evaluation.

Restructuring the internal organisation of fundamental schools

In relation to the school development plan, schools are required to reorganise their internal organisation and instate a school committee, cycle co-ordinators and a co-ordinator of the pedagogical team. Introducing a president of the school committee also clarifies who is responsible for systematic evaluation and improvement of the school.

The introduction of these bodies and new functions is expected to enhance the co-operation of teachers and to contribute to shared decision making about strengths and weaknesses, goals and necessary improvement actions. Shared decision making of, and co-operation between teachers and strong leadership in schools have proven to be important conditions for high quality internal evaluations in schools and effective school improvement (Heck and Hallinger, 2009). Participation of teachers in evaluating the school's academic development, making decisions about curriculum development in the school and working together effectively to achieve these goals enhances the type of learning-focused climate that characterises high-performing schools. Teachers who participate in decisions about how to perform evaluations will have greater understanding of the goals and programmes they are evaluating, and greater investment and motivation to use the evaluative information (Turnbull, 1999). The requirements for fundamental schools to reorganise their internal structure are therefore expected to improve teachers' ability and commitment to improve the quality of their school, both individually and as a team.

Availability of objective performance measures from national standardised student assessments

The MENFP has authorised the University of Luxembourg to annually administer the national standardised tests (*épreuves standarisées*) in French, German and mathematics to students in fundamental schools. Teachers are provided with a report showing the distribution of students' scores on the test in the different subjects. The *inspecteurs* are provided with an overview of the results of all the students in their schools. These reports have the potential of providing very valuable evaluative information on output of schools. As McNamara and O'Hara (2005) point out, schools can use this information in setting targets for improvement and in monitoring the introduction of new programmes, the quality of certain teaching methods or didactic approaches. The quality of internal evaluations increases when schools use these types of benchmark information to monitor and improve their own performance. Comparable information on the results of students in other similar schools or classes, as provided by the University of Luxembourg, can bring greater depth and breadth and a broader perspective to internal evaluations in schools.

Challenges

Lack of external school evaluations

One of the key challenges for school evaluation in Luxembourg is the lack of external evaluations and external criteria defining and monitoring quality of schools. Formally, *inspecteurs* in fundamental schools and *directeurs* in secondary schools have the authority and function to evaluate schools. They, however, also have a large number of other tasks in their schools such as management and administrative tasks. This dual task of evaluating and managing their schools leaves them little to no time to conduct external evaluations. It also poses challenges with respect to the objectivity and reliability of external school inspections as *inspecteurs* and *directeurs* would be inspecting their own work to some extent.

Inspecteurs and *directeurs* also have no common framework or set of standards to evaluate schools; one of the *inspecteurs* expressed during the OECD review that differing viewpoints among *inspecteurs* on what constitutes a "good school" have prevented the development of such a framework.

Also, available performance data (such as generated by the standardised tests) are not used to adapt teaching and learning and schools are not held accountable for outcomes on these tests.

The lack of external evaluations poses challenges to the evaluation and assessment system in Luxembourg as there is no common basis to judge and improve the qualities of schools and to confront schools with an external perspective, such as national standards, benchmarks or comparative data from other schools to improve. There are no formal checks integrated in the system of school evaluation to ensure that schools achieve their objectives and offer high quality. *Inspecteurs*, *directeurs*, and other stakeholders in and outside of the school (teachers, parents) rely mostly on implicit and informal knowledge and intuition of how the school is performing to make decisions. The strong emphasis on (only) internal evaluations of schools through the school development plan may result in schools choosing a narrow local perspective on educational quality and school improvement and may prevent schools to benefit from expertise and examples that are generated in other schools or elsewhere.

Lack of alignment of the elements in the school evaluation framework

Luxembourg also faces challenges in the lack of alignment of the elements in the evaluation and assessment framework: the evaluation criteria, the collection and analysis of evaluative information and data, and the use of evaluation findings for school improvement are practically not related and do not refer to the same underlying goals and vision of high quality schools and teaching and learning in schools.

A first example of this lack of alignment is the setting of competency-based student learning objectives and related evaluation criteria. The MENFP introduced competency-based student learning objectives for fundamental and secondary schools in 2008. Schools were expected to align their teaching, curriculum and grading of students to these national student learning objectives. They should for example develop more constructivist didactic and teaching approaches and align the content of their teaching to the national student learning objectives. At the start of this reform there were, however, no examples or guidelines to clarify how these competency-based student learning objectives should be implemented. Also, schools are free to choose their own teaching and instruction methods to implement these student learning objectives. In addition, teachers and schools

do not face consequences when failing to implement the competency-based student learning objectives as there is no external evaluation of their implementation and no evaluation of teachers in schools. As a result, school curricula and teaching methods are not aligned to the national competency-based student learning objectives and to the teaching programmes and practices that have been described by the MENFP during their implementation. Not only does this lead to very different criteria and goals to use in internal evaluation of schools, the evaluative information of standardised student achievement results provided by the University of Luxembourg also becomes to a large extent redundant for school improvement as schools are unable to relate the information to their own curriculum and teaching methods.

A second example concerns the lack of alignment of professional development of teachers with the implementation of the school development plan. Teachers are by law required to annually attend eight hours of certified professional development, training and schooling. Teachers may choose for themselves which courses, conferences or training activities they want to attend. They choose a wide variety of activities that mostly match their personal interests. In general there is no deliberation with the president of the school committee, the school *inspecteur* or the *directeur* on which type of training to follow. As a result, professional development of teachers is generally not aligned to the school development plan and the school-level issues identified as weak and in need of improvement.

A lack of incentives, authority and evaluation culture hinder school use of evaluation findings for improvement

A third challenge concerns the wide range of factors hindering the use of evaluation findings for school improvement. These factors are related to a lack of incentives for schools to act on evaluation findings and improve potential weak aspects, a lack of power or authority needed to implement certain improvements, a lack of useful evaluative information, and a culture promoting intuitive evaluation and decision making instead of structured collection of evaluative information and improvement.

Evaluation and assessment systems often include some kind of incentive for schools to use evaluation findings to improve. In other countries, these may include the publication of school report cards including student achievement results in a school, or increased external monitoring by school *inspecteurs* or the equivalent, or the specification of targeted school improvement trajectories and in a minority of cases, financial sanctions for failing schools. Incentives for schools to act on internal evaluation findings are often activated by the school's stakeholders; parents can for example voice their opinions on necessary improvements of certain evaluation findings or they may choose to send their child to another school when the school fails to improve. These incentives are all lacking in Luxembourg. There is no external evaluation mechanism or body to intervene in failing schools or impose sanctions on schools; there is no publication of school report cards with student achievement results as part of a clear policy to avoid the naming and shaming of schools; school choice is regulated by the *carte scolaire* and is limited to specific areas (it is absent in fundamental schools; in secondary education students can only transfer to another school when this school has the capacity to take in extra students). Also, teachers and *directeurs* face no personal incentives to perform well and improve weak aspects of the school as their salaries are unrelated to performance (but follow the seniority-based career path), and they serve on permanent contracts (see Chapter 4). The only exception is newly appointed *directeurs* in secondary education who

serve on fixed-term contracts of seven years. There are, however, no clear criteria to specify when contracts will not be renewed after seven years.

A second limitation to the use of evaluation findings for school improvement is the limited authority of *inspecteurs* and *directeurs* to act on evaluation findings. Even though the law stipulates some autonomy to fundamental schools (*e.g.* with respect to the choice of teaching materials and the school timetable), school autonomy is closely combined with the MENFP's control of financial resources and school organisations. Schools have limited control over the school budget and personnel. Teachers are for example employed by the MENFP and appointed to a school, based on seniority and grades on their examination in initial teacher training. Schools therefore have no means to select teachers that match their vision or match the school's need of teachers in a certain subject. Schools also do not have the authority to replace teachers that do not function well. They also have no means to pressure teachers to improve their functioning as the salaries are paid by the MENFP. Teachers decide themselves on how to use their eight hours of annual certified professional development; *inspecteurs* or *directeurs* have no means to oblige teachers to use these hours to improve their functioning on school-related matters. In addition, decisions regarding resource allocation are taken centrally, not reflecting for example outcome objectives of the school. This limited authority hinders *inspecteurs* and *directeurs* in making decisions to improve the teaching and learning in their school through, for example, redirecting financial and material resources to strengthen certain programmes or initiatives, or to mobilise teachers to work towards the school's shared intentions and goals.

The student achievement results on the national standardised tests (*épreuves standardisées*) have the potential of providing very valuable information to teachers and schools to improve the teaching and learning in schools. *Inspecteurs*, *directeurs* and teachers, however, report a number of difficulties in using these results to improve the teaching and learning in their school. Teachers state that the results of the national standardised achievement tests are not reported in time which makes it difficult to act on the results. A second problem relates to the lack of alignment of the tests to the school curriculum which makes it difficult, for example, to choose the topics that need re-teaching. The results for individual students are not distributed to teachers and this hinders them in targeting their instruction to specific educational needs of students. Also, the feedback reports sent to *inspecteurs* and *directeurs* show the distribution of results for all students on the subjects in the test (instead of for example performance of students in one class or grade), which is too general to decide on specific improvement actions, both on the classroom level and on the level of the school.

Last, the OECD review team found a culture in schools in which statements about the quality and functioning of the school are primarily based on informal exchange of information and observation instead of formal criteria and collection of evaluative information. Teachers and *directeurs* claim to know how well they are doing and how well the school is performing and functioning based on for example informal talks with students, observation of talks between teachers and students, observing work of students and snapshot observation of teaching, and the reputation of the school amongst parents. They strongly oppose the external evaluation of the functioning of schools and teachers as they expect these evaluations to lead to unfair assessment and classifications of schools due to for example the large differences in student populations. During the OECD review, teachers and *directeurs* often expressed a perception of no benefits to external evaluation as these evaluations only have an accountability function that does not contribute to school improvement.

Policy recommendations

On the basis of the analysis of strengths and challenges in this chapter, the OECD review team proposes the following directions for policy development:

- implement an external school evaluation mechanism
- establish reporting requirements to align the school development plan and national objectives
- ensure better use of available information for school improvement
- introduce incentives for school improvement
- build capacity for school self-evaluation

These policy recommendations are presented to create a more structured and elaborate school evaluation framework that takes into account the national and local circumstances in Luxembourg, such as the very centralised steering of internal evaluations in schools, the improvement-oriented function of evaluation, and the lack of an evaluation culture in schools.

Implement an external school evaluation mechanism

As previously described, it is important to include an external perspective in school evaluations and to ensure that the evaluation and assessment in schools is open enough to absorb relevant external influences. The OECD review team, therefore, suggests constructing an external school evaluation mechanism that will on the one hand support and strengthen the internal evaluation and development planning (in both fundamental and secondary schools), and will on the other hand confront schools with a common, external perspective and information on their quality.

External evaluations have the potential to build capacity in schools for school-based self-evaluation and will increase evaluation literacy in schools. Schools may be motivated to engage in internal evaluations if faced with an external evaluation requirement, even when internal evaluation is not suggested as an alternative to external evaluation but only as a prior condition and counterpart. External evaluations may also change the culture in schools towards more formalised and extended processes of evaluating teaching and learning and data analysis (Rudd and Davies, 2000). Schools may become more willing to use methods of evaluation that had not necessarily been used previously. External school evaluations can bring greater depth and breadth to internal evaluations in schools when they for example provide useful observations from their inspection region or supply the school with relevant benchmark information, comparative data from other schools or new and challenging ideas that might help the school to expand its evaluation, interpret its own data and assess its quality.

Introducing external evaluation in Luxembourg implies a clear distinction between management, administration, internal and external evaluations. External evaluators should be appointed who are not involved in management and co-ordination tasks in schools and who have the opportunity to evaluate schools in an objective, structured, valid and reliable manner. These evaluators could be part of the department of SCRIPT of the MENFP or they could be part of an independent new external evaluation agency. As a result, the role of *inspecteurs* in fundamental schools and *directeurs* in secondary schools should be redefined to focus entirely on management, co-ordination and pedagogical leadership of schools. The new external evaluators should develop clear external evaluation criteria and use available national

benchmark data to compare and evaluate schools on these criteria. In addition, external evaluators may also evaluate school internal criteria and goals as described in the school development plan, and/or evaluate the school's capacity to conduct internal evaluations.

Box 5.1 External school inspections in Wales (United Kingdom)

Self-evaluation of schools is obligatory in Wales. Schools are free to use any methods or models they prefer as the basis for self-evaluation as long as these focus on standards, quality of education and leadership and management. In practice, most schools use the Common Inspection Framework[1] as the basis for self-evaluation.

The school principal and governing body of the school are responsible for the school self-evaluation and the school development plan. The local authorities have a duty to promote school improvement and to support schools in this process. Also, the Inspectorate provides guidance on school self-evaluation on the website.

In Wales, schools are inspected as part of a national programme of school inspections on a six-year cycle. A Common Inspection Framework is used. For each key question within the framework, there is a table listing aspects of provision to be evaluated and criteria to help inspectors reach their judgments.

For the new cycle of school inspections, to begin in 2010, a more proportionate inspection, a greater involvement of users in self-evaluation and inspection, and an extension of the involvement of peer assessors in inspection are foreseen. Self-evaluation is inspected as part of the Common Inspection Framework. The Inspectorate assesses the quality of the school's self-evaluation process, the quality of the school's self-evaluation report and the extent to which the findings of the Inspectorate match those of the school. The outcomes of school self-evaluation are used to evaluate management and leadership in the school. The report of the inspectorate provides school management with clear and specific indications of the shortcomings they need to overcome in their post-inspection action plans. Schools with the most severe weaknesses are described as needing special measures. Their progress is monitored each term and they are re-inspected one year after being placed in special measures.

Note: 1) This can be downloaded from the National Inspectorate (ESTYN) website *www.estyn.gov.uk/english/inspection/overview/*.

Sources: European Commission (2010); van Bruggen (2008).

Establish reporting requirements to align the school development plan and national objectives

Structured and well-aligned quality assurance in schools involves a well-developed connection between evaluation criteria, collection of evaluation data and information and school improvement to address identified weak points. In Luxembourg, the most important challenge is to align the national targets for school improvement and competency-based reform to the school internal goals and evaluation criteria in the school development plan. Such an alignment will enable schools to use the national standardised student achievement results to improve the teaching and learning in their school.

The OECD review team suggests promoting alignment of the school development plan and national objectives by means of reporting requirements to schools. Schools should be required to add a section to their school development plan in which they describe how they will implement national reforms such as the competency-based student learning objectives, how they will align their curricula and teaching to these and how they will evaluate their implementation. These reporting requirements will on the one hand increase awareness in schools of national reforms and student learning objectives and will pressure schools to strategise and be transparent about how to implement these. The reporting requirements create on the other hand an opportunity for the MENFP to monitor

the implementation of the student learning objectives in a structured manner (instead of through informal communication with *inspecteurs*) and to make amendments when necessary. Potential external evaluators can also use these reports to evaluate schools.

Ensure better use of available information for school improvement

The student achievement results on the national standardised tests (*épreuves standarisées*) generate very valuable information for improvement of teaching and learning in schools. The usefulness of this information for school improvement is currently limited as results of individual students are not distributed to teachers, and results of classes and grades are not distributed to *inspecteurs* and *directeurs*. The use of this kind of information for school improvement can be improved through providing a common set of analyses and allowing schools to access the data to investigate the performance of their students in, for example, specific curriculum areas, comparing their classes and their school to schools nationally. Examples of tools to support schools in using this kind of information for school improvement can be found in England where the national inspectorate (the Office for Standards in Education, Ofsted) provides schools with an online tool with access to a dataset of student achievement data (see Box 5.2). Schools can use this information to assist teachers in planning their teaching to cater for the individual needs of students and to target school-level resources to subjects and curriculum areas in which student performance is low.

Box 5.2 Online analytical tool for school improvement in England (United Kingdom)

In England, a subsidiary of the national inspectorate provides an online analysis tool Reporting and Analysis for Improvement through School Self-Evaluation (RAISEonline) for use by schools, local authorities, inspectors and school improvement partners. By providing a common set of analyses, it supports school improvement and the school inspection process. External users cannot automatically access this dataset, although schools can choose to allow them access. RAISEonline includes functions that allow school leaders to produce their own "what if" scenarios and set targets based on these, to investigate student performance in specific curriculum areas, contextual information about schools including comparisons to schools nationally. RAISEonline allows school leaders to focus on areas or student groups where performance is particularly strong as well as on areas for improvement.

For more information see: *www.raiseonline.org*.

Introduce incentives for school improvement

Currently, schools in Luxembourg face no consequences for failing and no rewards for improvement or high performance. As several studies have shown, incentives are, however, essential components of evaluation systems as they impose stakes on schools to meet certain evaluation criteria and implement necessary improvement actions (*e.g.* Hanushek and Raymond, 2002; Elmore and Fuhrman, 2001; Nichols *et al.*, 2006). Students, teachers, and schools seem to work harder and more efficiently when something valuable is at stake; information (such as national standardised student achievement data) alone is often not sufficient to motivate schools to change and perform to certain high standards. In particular, high rewards and medium sanctions, targeted at the actors who are responsible for and in charge of necessary improvement actions or performance are expected to be effective (*e.g.* Hanushek and Raymond, 2001; Elmore and Furhman, 2001).

In Luxembourg, rewards and sanctions related to (the improvement of) teaching and learning of students could be targeted at teachers, while *directeurs* and *inspecteurs* could be rewarded or sanctioned for improving school-level conditions such as creating a coherent curriculum throughout the school. Rewards can for example include financial bonuses for high performance, or merit-based salaries. Other sanctions may include increased external monitoring and follow-up of schools and targeted external interventions.

Build capacity for school self-evaluation

The OECD review team advises that the MENFP give strong consideration to building school evaluation capacity by: introducing job requirements on evaluation expertise for *inspecteurs* and *directeurs*; making sure they have the time to evaluate their schools; and establishing the necessary protocols, guidelines and frameworks for the (internal) evaluation of schools. Further, the MENFP, as the direct hierarchical supervisor of *inspecteurs* and *directeurs*, would need to pay sufficient attention to the way these professionals undertake their (internal) evaluation tasks as part of their performance appraisal. Although a decentralised system, Ontario presents an example for consideration of the development of profiles and job requirements in Luxembourg. The "Leadership Framework" is research based and was collaboratively produced with school leader professional organisations (see Box 5.3).

Box 5.3 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.*

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Chapter 6

Education system evaluation

Over recent years, Luxembourg has made concerted efforts to prioritise the evaluation of the education system. Notably, Luxembourg has started to build evaluation capacity at the national level and has introduced a monitoring system. The chapter presents an overview of the major tools used to monitor the education system and approaches to evaluate the implementation of new initiatives within the system, plus reporting systems to feed back results from education system evaluation. Based on an analysis of strengths and challenges in the current approach to education system evaluation, the chapter presents a set of recommendations to validate and further develop the monitoring system, to improve reporting of system-level information and to further build education system evaluation capacity.

Context and features

Responsibilities for education system evaluation

Within the Ministry of National Education and Vocational Training (MENFP), the Department for the Co-ordination of Research in Pedagogical and Technological Innovation (SCRIPT) plays a major role in providing evidence for policy making at the system and school levels. There are three divisions within the SCRIPT, two of which carry the main responsibilities for evaluating the education system:

- The Innovation Division: conducts and oversees pilots studies for potential school reforms, as well as other school innovation projects and evaluates and follows up on these.
- The Agency for the Development of Quality in Schools (ADQS): its major missions are to "accompany schools in their internal evaluation" and to provide data to the MENFP for system and school monitoring (ADQS, 2011). This may include demands from the Minister for national reports on school performance and the "collection and synthesis of qualitative feedback received from schools".

The ADQS was created in 2009 as part of the legal decree of February 2009. This decree also authorised the MENFP to outsource external evaluations of the education system. The development of the national standardised tests is outsourced to the University of Luxembourg. Responsibilities for test development are shared. There is a working group (*Groupe de Travail Évaluation*) comprising representatives from the school *inspecteurs*, the SCRIPT and the test development team (EMACS), responsible for producing a coherent measure for the purpose of monitoring the Luxembourgish school system. However, all final decisions are commonly agreed by a senior representative of the SCRIPT and EMACS (Universität Luxemburg, 2011).

The Statistics and Analysis Department within the MENFP collects and compiles core data on the education system, including reporting data against the international standard classification for education systems (ISCED-97). Since 2002, it has published an annual report on key figures for education in Luxembourg (*Chiffres Clés de l'Éducation Nationale – Statistiques et Indicateurs*). It also lends support to the ADQS in compiling the results from the national non-standardised tests (see below).

Goals for the education system

In general, since 2007 Luxembourg has started to introduce minimum achievement standards for different stages and subjects in the school system. The national tests aim to monitor student performance in the school system as a whole against these national student learning objectives. Such student learning objectives are set for: the four pedagogical cycles in fundamental education (these were introduced in 2009); the first two years of secondary education (both general and technical) in French, German and mathematics; and the third and fourth years of secondary education in mathematics. Since 2009, student learning objectives are being developed and introduced for other subjects at the secondary level.

Further, Luxembourg has set a specific goal to reduce the number of early school leavers to 10% or less. This is part of a wider European Union programme (2020).

Another important aspect for system evaluation is the specific school improvement objectives specified in the 5-year government programme. This includes an action plan which should be followed up by the MENFP.

Major tools to monitor the performance of the education system

Participation in international student assessment surveys

Luxembourg participates in a number of cross-national comparative surveys. It has administered the OECD's Programme for International Student Assessment (PISA) for four cycles, since its inception in 2000. This offers comparative information on student performance at age 15 in reading, mathematics and science. To complement this information, Luxembourg also participated in the Progress in International Reading Literacy Study (PIRLS) in 2006, which assessed younger students towards the end of fundamental school (the first year of Cycle 4).

With the priority given to language development in the Luxembourgish education system, Luxembourg participates in a special European project to study language skills assessment (French, German and English) – the European Bank of Anchor Items for Foreign Language Skills (EBAFLS). This is conducted with six other countries (France, Germany, Hungary, Spain Sweden and the United Kingdom) and aims to develop assessment items for "reading" and "listening" skills in each language as defined in the European Language Framework (levels A2 and B1). The goal is to make language assessment more transparent and robust.

Luxembourg also participates in surveys on non-cognitive outcomes, including the IEA's International Civic and Citizenship Education Study (ICCS). Plus, (in collaboration with the Ministry for Health and Family), Luxembourg has participated in three international surveys on youth health and well-being (ages 11 to 17) – the WHO's Health Behaviour in School-aged Children (HSBC) studies in 2002, 2006 and 2010.

National tests of student performance

There are two types of national tests conducted in the school system in Luxembourg:

- National non-standardised tests in the eleventh year of compulsory education (Grade 5 General Secondary; Grade 9 technical secondary): the ADQS with support from the Statistics and Analysis Department collects and compiles student results from these tests in French, German and mathematics that are developed and scored by teachers against the specified national student learning objectives. The tests are administered at the same time in all secondary schools in Luxembourg. The results are then analysed at the national level and fed back to schools for their own comparative purposes.
- National standardised tests in fundamental and lower secondary education: the University of Luxembourg is contracted to develop these tests aligned to the national learning objectives. Test development involves collaboration with working groups of teachers and the ADQS. These are full-cohort tests and students are tested during three points of their compulsory education: in German and mathematics in the first trimester of Cycle 3 of fundamental education; in German, mathematics and French at the end of Cycle 4 of fundamental education; and also in Grade 5 of general secondary and Grade 9 of technical secondary education. Results are analysed and reported at the national level in an overall report and fed back to schools for their own comparative purposes.

Statistics on student progression through schooling and school leaving qualifications

Detailed statistics are compiled by the Statistics and Analysis Department on student progression through fundamental education and secondary education (see Box 6.1). This reflects the importance of the stratified structure of the school system in Luxembourg and shows information on grade repetition, as well as student entrance into different types of secondary education. Further, recent priority has been given to collecting qualitative information on student drop out from secondary education. Annual statistics are also reported on student final qualifications when leaving secondary education.

Box 6.1 Reporting on outcomes of the education system in Luxembourg

Information on outcomes of the education system is presented in a series of different reports on the MENFP's website. Most reports produced by the Statistics Service within the MENFP include links to electronic data files for readers to download and try to provide readers with data from earlier years for comparative purposes.

Since 2002, there has been an annual report on key figures in Luxembourg. This includes information on qualifications and certificates awarded in secondary education. For example, the 2009/10 edition presents information on the absolute number of certificates awarded in: General secondary education (*Diplôme de fin d'études secondaires*); Technical secondary education (*Diplôme de fin d'études secondaires techniques*); Secondary technician training (*Diplôme de technicien*); and Vocational training (*Certificat d'aptitude technique et professionnelle; Certificat de capacité manuelle; Certificat d'initiation technique et professionnelle*). Plus, the success rate (percentage of students completing) in each of the secondary education streams.

Since the academic year 2003/04, a series of specific reports on the fundamental and secondary sectors provide quite detailed statistics on enrolments and certificates awarded. However, these do not include results from the national standardised tests or non-standardised tests. For example:

- The focus report for fundamental education in 2009/10 (MENFP, 2011a) presents detailed enrolment information (by nationality, by age, by language spoken at home, by public/private sector, by special education institution), as well as information on special educational provision (reception class, special support programmes, students referred to the Multi-professional team) and progression through the pedagogical cycles (number and percentage of students taking an additional year to complete a cycle [also by gender] and being admitted early into Cycle 2), plus student orientation into different type of secondary education at the end of Cycle 4 (number and percentage, plus information on parental agreement with orientation decision).
- There is a specific report presenting certification information for secondary education (*e.g.* MENFP, 2011b). This includes details on number of students by grade obtained (*e.g.* in general and technical education and technician training: excellent, very good, good, quite good, no grade) as well as score point averages (overall score for the year, score in written examinations, score in oral examinations) for students in each general secondary school.
- The focus report for general secondary education presents results for students in the lower and upper cycles of general secondary education, as well as globally (*e.g.* MENFP, 2011c). Results show the average annual scores and distribution of students, information on student progression through each cycle (direct admission, admission after compensation, admission after extra work in summer, held back for repetition), plus the percentage of students with inadequate scores in each major subject. A similar report has been published each year for technical secondary education.

Box 6.1 Reporting on outcomes of the education system in Luxembourg *(continued)*

Since 2005, there is an annual report on student drop out from secondary education. This draws on results from standardised questionnaires administered by Local Youth Offices (*Action Locale pour Jeunes*, ALJ) to students who have dropped out. In 2008/09, 64% of secondary school drop outs provided information (MENFP, 2011d). The reports present information on student educational pathways, reasons for dropping out and current activities.

A new national report presents results from the standardised tests. The first publication (Universität Luxemburg, 2011) presents an overview of major results from the national tests and provides some examples of the nature of the tests that students sat. For example, the 2009/10 report shows average scores and score point distribution for students in each of the three major secondary school types (ES, EST, PR) in each of the main skill areas tested (mathematics, German and French reading comprehension), plus the average results of student answers to questions about their motivation to learn and class and school environment (percentage of students agreeing and disagreeing with various statements).

Plus, there are qualitative evaluation reports on specific programmes or research projects. For example, a report presenting summary of feedback from teachers and parents collected via surveys on the introduction of formative reports (*bilans intermediaries*) in fundamental education (MENFP, 2010). Plus, an evaluative report on the MENFP commissioned research project (PORTINNO) to develop the use of portfolio assessment as a tool for formative assessment in fundamental education (Brendel *et al.*, 2011).

There are also specific national reports presenting an overview of results for Luxembourg's students in international assessments (PISA 2000, 2003, 2006 and 2009; PIRLS 2006 and ICCS 2009).

Source: Overview of information available on the MENFP website (*www.men.public.lu*).

Evaluation of the implementation of national initiatives

Luxembourg has started to capitalise on the small scale of the education system by monitoring pilot initiatives on teaching or assessment strategies. This falls largely under the responsibility of the Innovation Division within the SCRIPT, but may also be conducted by the ADQS in some discrete areas. For example, before introducing the competency-based teaching and learning reform in fundamental schools, the "*école en movement*" initiative piloted this approach in five fundamental schools in 2008. A general first assessment of the reform is envisaged in December 2012, but the MENFP has already sought periodic feedback from fundamental schools and other key stakeholders and is thematically compiling this feedback as input for the general evaluation. Recent evaluations on pilot innovations include on the "Eis Schoul" and the use of a new portfolio tool for student assessment (Brendel *et al.*, 2011).

Strengths

Heightened political support for the use of evidence to evaluate the education system

This includes support for Luxembourg's participation in international studies to gain insight to strengths and weaknesses in international comparison. There is a political openness to external scrutiny and international collaboration. In particular, this seems to be well aligned with key priorities for the education system. For example, the work on

language development assessment items with partner European countries. Plus, participation in the present OECD review at a key stage of introducing a monitoring system to learn from international experience. There is also support to follow up on results gained from these international studies. For example, Luxembourg conducted its own follow-up study (LESELUX) of the IEA's PIRLS 2006 assessment to more deeply investigate and confirm key messages revealed by the main study.

The introduction of a national monitoring system

The introduction of national standardised tests clearly strengthens the evidence base for monitoring the education system in Luxembourg. This is an important complement to international evidence on the performance of the education system in Luxembourg, collected via its participation in international student assessments. Unlike international assessments, students are tested in both German and French in the standardised tests and these are aligned to the national student learning objectives. This provides important comparative information on student development in German and French, which are both of key importance in the Luxembourgish system.

Further, the standardised tests are designed with comparability of results in mind. That is, although developed in collaboration with teachers, all students sit the same test and their format is designed to maximise the objectivity of scoring, as such the test comprises multiple-choice questions and a few short answer questions (Universität Luxemburg, 2011). Again, this provides a much-needed complement to the other non-standardised national tests, for which there is a heightened degree of subjectivity in scoring, as these may comprise many different testing formats and are scored by teachers against national student learning objectives. It is of note, however, that details of the actual scoring procedure used in standardised tests were not clear to the OECD review team (see Chapter 2).

Growing attention to assessing a wider set of student competencies in education system evaluation

As part of the annual standardised tests, students complete a short questionnaire including questions on their motivation to learn and aspects of their class and school learning environments – these typically relate to interest in the subjects tested. These results were compiled and analysed in the first national report on results from the standardised tests. Although they are somewhat limited in scope currently, they have the potential to inform the policy debate on wider learning outcomes (see for example results in Section 3 of Universität Luxemburg, 2011).

The collection of results from the national non-standardised tests also allows a broader insight to student skills in mathematics, French and German. For example, the standardised tests only assess student reading comprehension skills in French and German, but the non-standardised tests also assess their written and listening skills in these languages. Therefore, together these provide a more rounded picture of student performance in lower secondary education in the three core subjects.

There is also national research funding (FNR) given to the University of Luxembourg to develop a computer-based assessment of complex problem solving (the "Genetics Lab"). This was pretested and evaluated in 2010 and will be conducted on a large scale sample of students in secondary education in 2011. Such research can inform the future development of the national standardised tests.

Growing recognition of the importance of collecting feedback on the education system from key stakeholders

Part of the mandate for the ADQS is to collect and synthesise qualitative feedback from schools, as commissioned by the Minister. This sends a strong signal on the importance of collecting feedback from key stakeholders. Indeed, this approach is observed, *e.g.* in recent evaluations of national school innovation projects (*e.g.* Eis Schoul) there is use of parental survey to seek feedback. Feedback was also sought from parents and teachers on the introduction of formative reports in fundamental education. The results of these opinion surveys were synthesised and analysed by the MENFP's Department for Fundamental Schooling and the ADQS and published in an evaluation report (MENFP, 2010). Such results have fed into the considerations for further development and refinement of the formative reports.

Challenges

Insufficient capacity for system evaluation

The creation of the ADQS in 2009 was a signal of the growing importance in Luxembourg for evaluating the performance of the education system. This serves as a useful complement to the Innovation Division charged with the development of specific educational initiatives. However, the small ADQS division carries the responsibility for the monitoring system, including the compilation and analysis of results from the non-standardised tests and analysis of results from the standardised tests. At the same time, the priority function for the ADQS appears to be supporting schools with their own quality assurance and development. This places great demand on the agency's resources and limits its role in the analysis and interpretation of results on the system as a whole.

Results on education system performance are underexploited

In general, there appears to be insufficient analysis on the different statistics produced at the national level. Results are presented in a series of different publications, but there is no sense of an overall evaluation of how the Luxembourg school system performs and where the major priorities lie. Further, within specific publications the analytical component could be strengthened to heighten the relevance for policy development. A recent and important example of this is the first report on the national standardised tests. It presents only a basic overview of results and does not go into any depth of analysis – certainly when contrasted with the national report of results from, for example, the PISA 2009 survey.

It is also unclear how results of education system evaluation are used to improve the monitoring system. For example, how results coming out of Luxembourg's participation in the EBAFLS project feed into considerations of national learning objectives development and related national assessments design. Another example is the investment of resources from the ADQS and the Statistics and Analysis Department to collect, compile and feed back school results from the non-standardised tests. These, indeed, are an important component of the evidence base for system evaluation, as they measure a wider range of the skills which students are expected to demonstrate, for example, written and listening skills in German and French which are not tested in the standardised tests (Universität Luxemburg, 2011). A major potential strength of these results is the possibility to analyse and compare teacher grading and assessment against the national student learning objectives, *i.e.* to improve the reliability of major indicators on the

education system. However, the OECD review team gained the impression that there was very little analysis of the results to this end. Results from the non-standardised tests are not presented in any of the major publications on outcomes for Luxembourg's school system (see Box 6.1).

Ensuring adequate alignment between education system measures and the competency-based learning objectives

With the introduction of the competency-based reform in fundamental education, there is a need to collect robust measures against these. Currently, there is no public report on the performance of students in fundamental education aligned to the national student learning objectives. The focus report on fundamental education (see Box 6.1) does not present results for student assessment on whether or not they obtained the learning objectives. It only presents descriptive information on the new organisation of fundamental education and continues to present information on student enrolment and promotion, as has been reported in this series since 2003/04. While it is clear that students who have achieved the learning objectives are promoted and those who have not follow an adapted third year to complete the Cycle, the statistics do not explicitly reference the learning objectives and may include students who have repeated a year(s) under the former system before the reform. It is of note that naturally the first report on results from the national standardised tests did not include results in fundamental education as exceptionally the tests were not conducted in fundamental education in 2009/10. However, it will be important to ensure such reporting in future and to adequately reflect these results in any focus reports on fundamental education.

A general challenge will be to adapt the current reporting approach to accurately reflect student progress against the learning objectives. As the learning objectives are progressively introduced throughout secondary education, it will be necessary to adjust the presentation of results on student progression and certification accordingly. Currently, the stratification of the education system – and not student competencies – remains the focus of reporting at the system level.

Policy recommendations

Over recent years, Luxembourg has made concerted efforts to prioritise the evaluation of the education system. The OECD review team commends these efforts, notably, the creation of the ADQS to complement the Innovation Division within the SCRIPT and the strengthened commitment to evaluate new education initiatives and to focus on outcomes of the education system. Drawing on the analysis in this chapter, the OECD review team recommends the following approach to further strengthen the evaluation of the education system:

- devise a framework for education system evaluation
- validate and further develop the monitoring system
- improve reporting of system-level information to show progress against competency-based learning objectives
- build education system evaluation capacity

Devise a framework for education system evaluation

The OECD review team strongly recommends that Luxembourg devise a framework to evaluate the school system. Due to recent efforts to strengthen the statistical and analytical base within the MENFP, there is currently much information collected and compiled on the education system. However, at the moment such information is collected and analysed for discrete areas (typically sectoral) and does not feed into a systematic analysis of the education system as a whole. Without such overall analysis, there is a lack of understanding of relative policy priorities throughout the system.

However, Luxembourg does have a set of goals for the education system. These are primarily the five year political agenda for the education system and the recently established learning objectives in fundamental and secondary education. Therefore, the MENFP should conduct an exercise to map out key objectives for the education system, followed by a set of specific goals or targets to be realised. For example, in the area of secondary education, reducing drop outs by 10% before 2020. There may be some reflection here around setting targets for student progress against the learning objectives, *e.g.* to increase the proportion of students achieving the learning targets in each of the pedagogical cycles, therefore reducing the proportion of students repeating. Further, these may pay attention to the achievement of different student groups to monitor the equity of outcomes, for example, boys and girls, students not speaking either Luxembourgish, French or German at home, students with a less advantaged socio-economic background, etc.

The next stage is a systematic mapping out of available measures, plus where measures are available a technical note on their validity and/or limitations for interpretation. An analysis of this framework will provide information on key gaps in data availability and also in limitations of existing measures. This will be the foundation of strategies to prioritise further measurement development and/or refinement according to the national political priorities and long-term goals. For example, a priority here would be to ensure that there is adequate monitoring and reporting on the learning objectives in fundamental and secondary education. Also, if equity of outcomes is a priority focus, then measures need to collect the necessary information on student characteristics to allow the comparison of different student groups. This mapping out is also a critical exercise in reminding all stakeholders of the full spectrum of national priorities and goals and clearly showing that not all of these are currently measured. For example, the new standardised tests measure a set of student skills in mathematics and language development, but do not measure skills in other learning objective areas. To ensure that education policy is not driven by the availability of data, there should be a systematic review of the availability of key measures in a meaningful and nationally agreed education system evaluation framework.

This framework for the evaluation of the education system would form the basis for an annual report on the education system (see below).

Validate and further develop the monitoring system

The OECD review team commends the development of a monitoring system in Luxembourg. The decision to establish a set of standardised tests to provide information on student performance against the learning objectives, both aims to add robust evidence on the education system and to build student test development capacity at the national level. This will also provide much needed evidence against the learning objectives, to complement other evidence on the education system coming from international assessments.

In further developing the monitoring system, the OECD review team underlines the following considerations. First, priority attention should be paid to ensuring the validity of the standardised tests. The OECD review team identifies three core criteria to ensure that the optimal added value of the standardised tests to system evaluation. They should be designed:

- to ensure a valid measure against discrete areas of the national learning objectives (alignment with the intended curriculum);
- to provide technically sound measures that can be reliably compared throughout the system (high scoring reliability); and
- to monitor progress against the learning objectives over time (ensuring stability of core test content to allow comparability of results across years).

It is critical that the MENFP evaluate the standardised tests to ensure that they deliver on these three criteria. The first entails not only an adequate alignment of test content against the national learning objectives, but also the ability to report meaningful results against this. On the second, this is clearly the added value of the standardised tests compared to the non-standardised tests (*épreuves communes*). The compromise for high scoring reliability may currently be a more limited assessment of student skills. While the *épreuves communes* allow a more rounded assessment of student skills against the learning objectives, there is significant challenge to their scoring reliability and thus, their comparability throughout the system. The third is of critical importance as currently there are no national measures that are comparable over time. All measures (*épreuves communes*, orientation of students from fundamental to secondary education, final certificates in secondary education) comprise both high subjectivity in scoring (scored by the School orientation council or class teachers) and different content and difficulty levels from one subject to another and from year to year. As such, much of the policy discourse on progress and improvement over recent years has been fuelled by results of Luxembourgish students in international assessments. Such measures show high comparability over time, but do not specifically measure student progress against national learning objectives and priorities.

Second, there should be clear documentation and understanding of the equity/suitability of these tests for students with different developmental needs (see Chapter 2).

Third, Luxembourg should identify major gaps in the evidence base for education system evaluation (see above) and develop a strategic plan to extend the monitoring system where necessary. This can be conceived as a cycle of collection of evidence for education system evaluation. Given the small scale in Luxembourg, this would entail full-cohort testing, but does not need to include an annual testing of the same content areas. For example, although these relate to sample surveys, Australia, the Flemish Community of Belgium, the Netherlands and New Zealand all conduct cyclical tests of different learning content primarily to provide information at the system level (see Box 6.2). Further, Norway provides an example of a standard survey administered to students in selected years of compulsory education in order to seek information on student learning motivation, class climate and school environment. Such a tool may provide ideas of how to extend the student questionnaire used in the administration of the national standardised tests. For example, an exceptional extension of the student questionnaire could allow a timely collection of feedback from students on their experience with the new competency-based learning objectives.

Box 6.2 Approaches to broaden the evidence base for education system evaluation

Cyclical reporting on key outcomes of education systems

In Australia, to complement annual full-cohort testing of students in numeracy and literacy skills, there is a cyclical sample survey. On a three-year cycle, the survey monitors alternately student outcomes in science, ICT, civics and citizenship, all of which are national priority areas. Each assessment results in a report showing student proficiency levels in the subject assessed that year, plus performance of different key student groups and allows a comparison of progress over the three year period since the last assessment in that subject (see for example MCEECDYA, 2010).

The Netherlands and New Zealand also administer monitoring sample surveys on set cycles. In the Netherlands, Dutch and mathematics are assessed on a five-year cycle, but other wider areas are also periodically monitored, including world studies, history, geography, biology, physics/engineering, English, music and physical education (CITO, 2008). In New Zealand, different sets of subjects are monitored on a four-year cycle, *e.g.* Cycle 2 monitors music, technology, reading and speaking, Cycle 4 monitors listening and viewing, health and physical education, and writing, etc.

Qualitative feedback from key stakeholders on reforms

Norway runs an annual compulsory student survey in three different grades of secondary education. It is completed on line by students and can be administered in other grades also. In order to provide evidence on an education reform (the Knowledge Promotion), in 2007, two other voluntary surveys were developed for parents and teachers. The three surveys are aligned and together can provide insight to stakeholder perception on major areas of the reform.

Sources: Santiago *et al.* (2011); CITO (2008); *http://nemp.otago.ac.nz*; Nusche *et al.* (2011).

Improve reporting of system-level information to show progress against competency-based learning objectives

The OECD review team underlines the importance of clear and comprehensive reporting in system-level publications against the national student learning objectives. This will play a vital role in promoting the acceptance and implementation of the new competency-based learning objectives in schools throughout Luxembourg. In particular, the reporting of results from the national standardised tests should lead the way. While there are concerns to respect the confidentiality of results from the national standardised tests, there are several possibilities to improve the current presentation of results in the summary report. Notably, – and this also holds for teacher grading results – there should be a reporting of the proportion of students overall by performance category: standards attained with reserve; standards attained; advance level; level of excellence. There is also room to present average results for different student groups, *e.g.* by gender, by language spoken at home, by socio-economic background, etc. All such reporting will continue to respect the confidentiality of results for individual students and schools. In future years, a keen area of reporting interest will be to show changes in these key performance indicators over time.

Further, there is room to actively promote discussion among key stakeholders of the major results from the national standardised and non-standardised assessments. This would offer an opportunity to promote deeper understanding of the learning objectives and timely feedback to the MENFP and the test developers. In the Flemish Community of

Belgium, the Ministry organises an annual conference to which all key stakeholders are invited to present and debate the key results from the national assessments. A summary report records the discussions and feeds into further considerations to develop and refine future national assessments (Flemish Ministry of Education and Training and the University of Antwerp, 2011).

Build education system evaluation capacity

A major signal of political support for evaluation is to establish national bodies competent in this area. The creation of the ADQS, therefore, represents a commitment to the importance of education system evaluation in Luxembourg. There have also been efforts to gradually build up the staffing capacity of the ADQS (ADQS, 2011), but it remains a small unit with an increasingly prioritised mandate. Further, priority appears to have been given to the ADQS mandate of supporting schools, rather than its mandate to evaluate the education system. At the same time, there has been increased support to statistical activities within the MENFP, with a Statistics and Analysis Department restructured in 2007 and the publication of a series of reports on different parts of the education system (see Box 6.1).

A key priority is to continue to build the analytical capacity at the national level. The MENFP must ensure the statistical, analytical and research competencies to fully exploit existing information on the education system for policy development. This is critical for the long term credibility of the monitoring system. The adequate analysis, interpretation and reporting of key results in a way that makes them accessible to all key stakeholders will build support for education system evaluation and also promote the discussion of such results throughout the system. One way is to systematically report the results of such analysis in major publications such as an annual report on the state of the education system. This report would reflect the nationally agreed education system evaluation framework (see above) and present key results against this, including progress made on achieving the goals of the education system. The OECD review team would recommend the necessary support is given to ensure the publication of such a report. This could be jointly produced by the Statistics and Analysis Service and the ADQS. This should in turn be used as a basis to set priorities for further research and analysis and resources should be invested accordingly.

Finally, the active participation in international evaluation networks and education measurement efforts also helps to build and promote capacity in national institutions. It is, therefore, important that the ADQS (and the University of Luxembourg) continue its active involvement in international projects and share this expertise with the development of national monitoring tools.

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Conclusions and recommendations

School system context

A centralised and predominantly public school system with a recently introduced degree of autonomy

Schooling in Luxembourg is highly centralised with the Ministry of National Education and Vocational Training (MENFP) responsible for the planning and administration of all teaching in public schools. However, over recent years there has been a stronger role for schools in implementing evaluation and assessment policies, notably with the increased emphasis placed on school self-evaluation. The vast majority of students attends public schools and follows the national student learning objectives towards nationally recognised qualifications. Public secondary schools are directly managed by the MENFP, via the direct appointment of a school leader (*directeur*) and the setting of a detailed legal framework. The *directeur* is expected to evaluate the school and report directly to the MENFP. Up until 2009, the MENFP and the districts were jointly responsible for public fundamental schools, but the MENFP now appoints teachers and assigns them to the districts. Each fundamental school is under the authority of a local education authority *inspecteur* who acts as an intermediary between fundamental schools and the MENFP. Fundamental schools do not have school leaders, so the *inspecteur* takes on the role of a "floating" school leader, who also monitors school compliance to laws and regulations and reports back to the MENFP. There is a certain degree of autonomy in fundamental schools regarding the organisation of learning, which is reflected in student assessment activities and school development planning.

First academic selection typically at age 11 and a high incidence of grade repetition

Luxembourg's proud multilingual tradition is reflected in its school system: fundamental education is taught in *Lëtzebuergesch* in Cycle 1 and in German in Cycles 2 to 4. At the end of fundamental schooling (typically at age 11), children are selected by their academic ability (primarily in German, French and mathematics) and attend either general secondary education (ES) or technical education (EST). A School Orientation Council (*conseil d'orientation*) is responsible for this decision, although parents do have the right to appeal. After three (EST) or four (ES) years of lower secondary schooling, students specialise in particular subjects (ES) or tracks leading to specific qualifications (EST). The Technical diploma (EST) and the secondary school diploma (ES) give students the right to enter university. Grade repetition is a common practice that contributes to a high age-grade discrepancy throughout the school system. In 2010/11, 17.9% of students in fundamental schools, 18.6% in secondary general schools and 63.5% in secondary technical schools were older than the theoretical age for their grade. International comparisons of student performance at age 15 reveal worrying inequities: a larger than average proportion of low performing students; a strong influence of

socio-economic factors over student performance and performance difference among schools; and a major performance disadvantage on average for students with an immigrant background, including particularly pronounced performance differences for certain immigrant groups. National statistics show that students with an immigrant background are more commonly oriented towards secondary technical education.

The introduction of competency-based learning objectives, a new organisational structure in early years and an increased focus on evaluation and assessment

In 2009/10, the first nine years of schooling were reorganised into four pedagogical cycles regrouping pre-primary and primary education into "fundamental education". For each cycle, there is a defined set of competency-based learning objectives (*socles de compétences*) that students must master by the end of the cycle in order to progress to the next pedagogical cycle. Students who have not achieved all learning objectives by the end of the cycle, can follow a special third year programme. Competency-based learning objectives have been introduced in French, German and mathematics in lower secondary education, but there is an ongoing discussion with key stakeholders to extend the competency-based reform throughout secondary education. Further, new student assessment initiatives have been introduced, including: requirements for teachers in fundamental education to document student learning progress; new standardised national assessments to monitor student outcomes against the learning objectives in French, German and mathematics in fundamental school (start of Cycle 3) and in lower secondary education (Grade 5ES and 9EST); and a national test with uniform content at the end of Cycle 4 of fundamental school (*épreuves standardisées*). The MENFP also collects results from the teacher-developed national non-standardised tests (*épreuves communes*) to monitor outcomes in lower secondary schooling. There has also been a drive to strengthen school self-evaluation, with requirements for schools to produce development plans and national support to build school capacity in this area. At the same time, the MENFP has commissioned and evaluates several pilot studies in different schools to encourage innovative approaches to teaching and learning.

Strengths and challenges

Evaluation and assessment policies aim to improve quality, but the evaluation and assessment framework is not yet complete and coherent

A central drive of recent educational policy making has been to tighten and make more coherent the role for evaluation and assessment in improving school quality in Luxembourg. This has led to the development of evaluation instruments to strengthen the focus on student performance and progress in classrooms, schools and at the policy-making level within the MENFP. However, many evaluation and assessment activities have been developed in parallel and do not yet work together well. This lack of a coherent evaluation and assessment framework is a challenge shared in many OECD countries. In Luxembourg, the framework does not include the key components of teacher appraisal and external school evaluation, the appraisal of secondary school leaders and recent initiatives to strengthen formative assessment of students are underdeveloped, and there is a lack of processes to ensure the validity of teacher grading as part of student summative assessment. The OECD review team found a culture in schools where statements about

the quality and functioning of the school are primarily based on informal exchange of information and observation instead of on formal criteria and the collection of evaluative information. In general, there is no overall conception and shared understanding of "quality": the *inspecteurs* in fundamental education do not have a common framework of indicators for school quality; there is no profession-wide agreement on what counts as accomplished teaching; the common information reported by secondary schools (*contingent*) is compliancy-oriented and does not speak to the quality of teaching and learning; and varying implementation of the competency-based learning objectives lead to different criteria and goals being used in school self-evaluation.

Policy accords a key role for evaluation and assessment in monitoring equity, but the student is not at the centre of the evaluation and assessment framework

Importantly, evaluation and assessment instruments are seen to play a key role in monitoring and shedding light on the reasons behind the large impact that student socio-economic and migrant background has on their school performance. There is strong political support for the need to diversify the public school offer in Luxembourg given the increasingly heterogeneous student population and the MENFP has supported several initiatives to explore alternative pedagogical approaches, notably in lower secondary technical schools. The MENFP commissions evaluations of these innovative approaches and uses results of such evaluations as a springboard to debate different areas of potential innovation throughout the school system. However, the underlying rigid structure of the school system in Luxembourg makes it hard to take actions based on evaluation results. The high incidence of grade repetition in Luxembourg's school system is an obvious indicator that students are not at the centre of the assessment and evaluation framework. Despite recent progress with attempts to address this structural issue (notably with the introduction of the competency approach and pedagogical cycles in fundamental schooling), the OECD review team noted that students have no say in their orientation or progress at key stages of schooling, little say in their learning and that there is limited account taken of the additional difficulties that the strong emphasis on student proficiency in *Lëtzebuergesch*, German and French poses for students with an immigrant background.

A new focus on learning outcomes with the introduction of a competency approach to learning in schools, but implementation has not been systematic

The introduction of standard-defined competencies to be attained by students at different ages can be a powerful tool to improve teaching and address students' learning needs. Defined minimum competency levels were introduced in 2007 at the secondary level in basic subjects (languages and mathematics), followed in 2009 in the four major pedagogical cycles of fundamental schooling, plus there is ongoing work to develop standards in other secondary school subjects. At the same time, there has been the gradual introduction of new reporting requirements for teachers to document student learning progress against these competencies. Within fundamental schools, implementation of such reporting has followed the student cohort through each pedagogical cycle and the MENFP has actively sought feedback from teachers and parents on the new reporting tools. While the OECD review team commends the reform, it notes that several aspects of the implementation have not been conducted in a systematic way. Interviews during the OECD review revealed a lack of coherence among key players leading to various

alignment problems: student standardised assessments were developed before the student learning objectives had been developed or clearly defined; the development of the competency-based student learning objectives was undertaken by different groups simultaneously and did not pay adequate attention to the alignment of competencies across different levels and age groups; the engagement of teachers in working groups for competency development appeared rather *ad hoc*; there are no national mechanisms in place to check on the alignment of the teacher-developed national non-standardised student tests (*épreuves communes*) with the new student learning objectives.

The MENFP communicates regularly with schools, but there is confusion over the purpose of and responsibilities for evaluation and assessment

During the OECD review, the team formed the impression that there were close ties between the various stakeholder groups and the MENFP. The relatively small scale of the Luxembourg school system (154 fundamental schools and 35 secondary schools) is obviously capitalised on to foster regular communication between the MENFP and schools, via both formal and informal channels. However, despite the MENFP's strategy to emphasise the improvement function of evaluation and assessment activities, the OECD review team perceived a defensive culture among educators, with many reporting a perception that external evaluation only has an accountability function. This may be fuelled by a lack of clarity on the different roles and responsibilities within the evaluation and assessment framework. For example, at the national level, the Agency for the Development of Quality in Schools (ADQS) within the MENFP plays a key role in school quality improvement, but has fought to build credibility in this area, as schools are aware of its role in monitoring the school system. Within the MENFP, there is room to clarify responsibilities for the development of evaluation and assessment activities and also to strengthen the oversight of standardised assessment development. At the school level, although *directeurs* are expected to observe and evaluate their teaching staff, they do not always do so. However, this may be due to the limited room for *directeurs* to act on the results of their staff evaluations.

Good initiatives to use student assessment to monitor and promote equity, but summative assessment approaches pose problems for equity

There is clear communication that new student assessment initiatives should be used to monitor progress, support learning and improve equity. In particular, the introduction of a uniform national test at the end of Cycle 4 in fundamental education is an important step in making the decision process for student transition from fundamental to secondary education more equitable. The commitment to feed back results from national tests to schools and classes is also commendable (and will be significantly improved with the reporting of individual student results). However, student performance in French and German at the end of fundamental education counts for two-thirds weight in the decision on which secondary school type they will be oriented to and this disproportionately impacts some student groups. Although parents are allowed to appeal, revised decisions will be based on additional testing in French, German and mathematics. Further, the OECD review team noted a lack of moderation procedures in place for teacher scoring and grading of students in high-stakes summative assessment. Reliable scoring is a

necessity for high validity and comparability of results and the absence of adequate moderation procedures implies a significant challenge to the equity of student outcomes.

The shift to competencies has great potential to strengthen formative assessment and engage students in self-assessment, but this is not yet fully exploited

The recently introduced competency-based approach to learning emphasises the formative aspect of assessments through frequent timely feedback while also providing the appropriate tools for improvement. In particular, the regular reports on student learning progress (*bilan intermédiaire*) in fundamental schools are being used to compare students' performance with the predefined end-of-cycle objectives at the end of each trimester. The 2009 law considers formative assessments as an essential factor in students' motivation, self-confidence and progress. During the OECD review, interviews with parents and students indicated high levels of motivation towards the competency approach. However, the OECD review revealed at this early stage of implementation, several areas where the intended formative function of new initiatives is not currently understood and/or effectively implemented. For example, there was little evidence of the extent to which results from the interim student formative reports are used in a systematic way to guide teaching and improve learning. Further, although some of the standardised assessments carry a formative purpose, results are not immediately available to teachers and do not show performance of individual students. The OECD review team saw little evidence of students setting their own learning goals, assessing their progress and planning how they will improve. However, without the communication and involvement of students during the planning, implementation and review of assessment activities, these may not be effectively integrated into the daily processes of teaching and learning.

A range of professional development support for teachers on student assessment is offered, but there lacks coherence between different types of national assessments

The MENFP recognises the key role that professional development plays in implementing the new competency approach to teaching and assessing students and both directly provides and outsources training. The topics of these optional courses for teachers are often developed in co-operation with schools and teachers and there is high demand. The OECD review revealed concerns over a lack of coherence between the standardised assessments (based on the competencies approach) and the non-standardised assessments developed by teachers. This inconsistency adds confusion and uncertainty to the complex role and purposes of these assessments. During the OECD review, teachers reported that the competency-based student learning objectives were developed without considering the implemented curriculum, challenging their ability to adapt and modify their teaching methods. Teachers are not yet clear on the purposes of the various assessments (in particular the standardised assessments in Cycle 3 of fundamental education and Grades 5ES and 9EST of secondary education) and how results can be used and interpreted to inform further teaching and learning.

Reforms stimulate professional dialogue among teachers, but there is a need for more pedagogical leadership

The recently introduced competencies-based approach to student learning impacts both teachers' teamwork and the way teachers communicate with students and parents. The reorganisation of fundamental education into four 2-year pedagogical cycles means that pedagogical teams typically meet every week to discuss students' learning progress, preparation of lessons and support for students. Teachers can also be part of school committees and therefore have opportunities to share responsibility for the organisation of work within the school. The MENFP also engaged some teachers in working groups to develop the new competencies. Similar structures to promote teamwork exist at the secondary level, including a teacher council for each class to oversee teaching and learning, student progress and discipline, plus a body of all teachers in the school (*Conférence des Professeurs*) produces recommendations to the *directeur* and the MENFP. Further, the requirement for schools to produce development plans is expected to stimulate a reflection on the quality of teaching and learning and how to improve this. However, pedagogical leadership in schools is not a system-wide expectation. *Directeurs* do not have to undergo specific training for school leadership and typically developed competencies on the job. The OECD review team gained the impression that *directeurs* are overwhelmed with tasks at the schools and, in general, they do not seem to have the time to engage properly in the coaching, monitoring and appraisal of teachers. In fundamental education, each *inspecteur* oversees all the schools in his/her district (*arrondissement*) – in some cases, more than ten schools – and assumes a range of roles notably ensuring compliance with national regulations. This considerably limits their capacity to engage in pedagogical leadership.

Teachers have opportunities for professional feedback from inspecteurs and directeurs, but there is no common understanding of what constitutes good teaching

Teachers have opportunities to engage in a professional interaction with *inspecteurs* and *directeurs*. This allows teaching practices, student results and the implementation of reforms to be discussed to the benefit of a teacher's practice. The *inspecteur* has both a supportive function and a monitoring function, as the *inspecteur* represents the MENFP in ensuring that the law, decrees and directives are being enforced in the schools s/he manages. This includes guaranteeing teachers perform satisfactorily and parents' complaints are addressed. Similarly, secondary school *directeurs* are expected to engage in a continuing dialogue with teachers, providing regular feedback for the improvement of their practice, but they also represent the MENFP in ensuring the school and the teachers comply with national legislation. The new position of special support teacher (*instituteur-ressources*), an experienced teacher working closely with the *inspecteur* and assisting a few schools with their development activities, creates additional opportunities for teachers to receive feedback from an experienced professional. However, in Luxembourg, there are no teaching standards or profile of what teachers are expected to know and be able to do. There are no performance criteria or a reference against which teachers are appraised, that is, each *inspecteur* and *directeur* may use a different concept of accomplished teaching and learning. In addition, there is a lack of agreed procedures and instruments to appraise the performance of teachers so standards of reliability, validity and fairness can be met.

A probationary period for teachers is well established, but there are no career opportunities for effective teachers

A probationary period for newly qualified teachers is well established. They must follow a two-year induction programme at the end of which they are required to pass an examination to gain access to a permanent post as a civil servant. Appropriately, the successful completion of the probationary period is acknowledged as a major step in the teaching career. However, there is no career path for established teachers. The role of *inspecteur* or *directeur* is not regarded as a major step in the teaching career and no other steps exist. There are a few roles with different responsibilities, including cycle co-ordinator and member of the school committee in fundamental schools and head of department in secondary education, but these are not formally recognised in the teaching career. This is likely to undermine the potentially powerful links between teacher appraisal, professional development and career development.

Requirements and provisions for teachers' professional development are not necessarily linked to school development

Teachers are required to undertake eight hours of certified professional development each school year. The MENFP organises professional development activities, determines priority areas and (particularly in fundamental education) may establish certain professional development activities as mandatory for teachers. The Institute for Continuing Training for Teaching and Education Staff in Schools within the MENFP promotes, co-ordinates and organises professional development activities for teachers; provides advice to schools on their professional development plans; and certifies the professional development activities that teachers undertake. Teachers' professional development is intended to respond to teachers' individual needs as well as the needs of schools, local communities and the school system. However, the OECD review team formed the view that professional development activities undertaken by teachers do not necessarily derive from an assessment of needs made through teacher appraisal by *inspecteurs* and *directeurs*. There is scope to better link professional development to school development, as professional development activities are mostly an individual choice of the teacher which is often not associated with school development needs.

Strong central steering and support for school self-evaluation, but elements within the school evaluation framework are not aligned

The framework for school evaluation in Luxembourg is developing rapidly, particularly in fundamental schools, driven by strong central steering and support to schools in their development planning and self-evaluation. The requirement for schools to renew their school development plan every four years is expected to enhance frequent internal evaluation in and improvement of schools. Central support from the ADQS for this ongoing goal setting and evaluation is expected to create a climate in schools for sharing and making strategic use of evaluation findings. Specific, targeted training programmes (such as the ones organised by the MENFP) have the capacity to promote buy-in of teachers to conduct these evaluations and to improve their capacity to act on evaluation findings. Further, close ties between the MENFP, *inspecteurs* and schools enable a strong coupling and adaptation of education national policy to the specific needs

of schools. However, the evaluation criteria, the collection and analysis of evaluative information and data, and the use of evaluation findings for school improvement do not refer to the same underlying goals and vision of high quality schools and teaching and learning in schools. Notably, there was no guidance or incentives for schools and teachers to implement student competency-based learning objectives in their self-evaluation activities. This leads to very different criteria and goals being used in internal evaluation of schools and limits the relevance of results from standardised assessments for school improvement. Further, there is a risk that professional development of teachers is not aligned with the implementation of the school development plan and does not correspond to identified training needs for the school as a whole. These factors are related to a lack of incentives for schools to act on evaluation findings and improve potential weak aspects, a lack of power or authority for schools to implement certain improvements, a lack of useful evaluative information, and a culture promoting intuitive evaluation and decision making instead of structured collection of evaluative information and improvement.

New responsibilities for self-evaluation and school development, but a lack of external evaluation

In relation to the school development plan, fundamental schools are required to reorganise their internal organisation and instate a school committee, cycle co-ordinators and a co-ordinator of the pedagogical team. Introducing a president of the school committee also clarifies who is responsible for systematic evaluation and improvement of the school. The introduction of these bodies and new functions is expected to enhance the co-operation of teachers and to contribute to shared decision making about strengths and weaknesses, goals and necessary improvement actions. The school development units being introduced to secondary schools are expected to bring similar benefits. However, a key challenge is the lack of external school evaluations and external criteria defining and monitoring school quality. Formally, *inspecteurs* in fundamental schools and *directeurs* in secondary schools have the authority and function to evaluate schools, but they also are responsible for management and administrative tasks. This dual task of evaluating and managing their schools poses challenges with respect to resources, and also to the objectivity and reliability of "external" evaluations. *Inspecteurs* and *directeurs* have no common framework or set of standards to evaluate schools. The lack of external evaluations means there is no common basis to judge and improve the qualities of schools and to confront schools with an external perspective, such as national standards, benchmarks or comparative data from other schools to improve. The strong emphasis on (only) internal evaluations of schools through the school development plan may result in schools choosing a narrow local perspective on educational quality and school improvement and may prevent schools learning useful evaluation and improvement approaches from other schools.

Heightened political support for education system evaluation, including a new monitoring system, but insufficient analytical capacity

Luxembourg has a political openness to external scrutiny and aligns international work with key priorities for the education system, *e.g.* work on language development assessment items with partner European countries and the present OECD review at a key stage of introducing a monitoring system. There is also support to follow up on results in international studies, including via reporting and analysis and a follow-up national study

after the Progress in International Reading Literacy Study (PIRLS) 2006. The introduction of national standardised tests clearly strengthens the evidence base for monitoring the education system in Luxembourg. This is an important complement to international evidence on the performance of the education system, providing comparative information on student development in German and French, which are both of key importance in the Luxembourgish system. The creation of the ADQS in 2009 was a signal of the growing importance in Luxembourg for evaluating the performance of the education system. However, the priority task for the ADQS appears to be supporting schools with their own quality assurance and development. This places great demand on the agency's resources and limits its role in the analysis and interpretation of results on the system as a whole. In general, there appears to be insufficient analysis on the different statistics produced at the national level. Results are presented in a series of different publications, but there is no sense of an overall evaluation of how the Luxembourg school system performs and where the major priorities lie. Within specific publications the analytical component could be strengthened to heighten the relevance for policy development. Further, the OECD review team gained the impression that very little analysis was conducted on the collected results from national non-standardised tests, *e.g.* to analyse and compare teacher grading and assessment.

Growing attention to collecting evidence on wider set of outcomes, but a need to align national reporting to new competency-based learning objectives

As part of the annual standardised tests, students complete a short questionnaire including questions on their motivation to learn and aspects of their class and school learning environments. Although somewhat limited in scope, they have the potential to inform the policy debate on wider learning outcomes. The collection of results from the national non-standardised tests to complement results from standardised assessments also provides a more rounded picture of student performance in lower secondary education. National research funding (FNR) supports the development of a computer-based assessment of complex problem solving (the "Genetics Lab") which can inform the future development of the national standardised tests. Part of the mandate for the ADQS is to collect and synthesise qualitative feedback from schools, as commissioned by the Minister. This sends a strong signal on the importance of collecting feedback from key stakeholders and analysis of results can lead to further development and refinement of evaluation and assessment tools, *e.g.* the formative reports in fundamental education. A general challenge will be to adapt the current national reporting approach to accurately reflect student progress against the competency-based learning objectives. As these are progressively introduced throughout secondary education, it will be necessary to adjust national reporting on results on student progression and certification accordingly. Currently, the stratification of the education system – and not student competencies – remains the focus of reporting at the system level.

Policy recommendations

Establish a coherent framework for evaluation and assessment with the student at its centre

The OECD review team recommends that at this critical stage of implementation the MENFP devise a strategic plan to complete the evaluation and assessment framework. There should be clear expectations that the results of evaluation and assessment activities are used to inform the improvement of teaching and learning. An important first step in making the framework more coherent will be to adequately align the various aspects that are currently in place or being introduced. Notably, the new competency-based learning objectives (*socles de compétences*) should be at the heart of evaluation and assessment activities, including regular formative assessment activities with students, national assessments, school development plans and the national monitoring and reporting system. Similarly, in further developing and completing the evaluation and assessment framework, the OECD review team recommends: developing a set of teaching standards and importantly ensuring that these are aligned with the student learning objectives; developing a common understanding of school quality in Luxembourg; introducing an external review of schools to monitor the quality of teaching and learning and validate processes in place to organise developmental teacher appraisal. A coherent evaluation and assessment framework would also allow the more explicit detailing of how evaluation and assessment activities at the student, teacher, school and school system level link together to ensure that these are complementary. This can include how the different types of national assessments complement each other, as well as the regular classroom assessment activities set by teachers to inform on student learning progress, and how the results from all these student assessment activities fit into school self-evaluation activities.

Clarify roles and responsibilities within the evaluation and assessment framework

In completing the evaluation and assessment framework, it will be of key importance to clarify the roles played by different stakeholders. This includes a more active role for students in assessing their own progress and heightened responsibility for teachers to ensure regular formative feedback to students and their parents on student learning progress. Further, it is strongly recommended that the MENFP recognise the important role that pedagogical leadership plays in effectively translating assessment and evaluation results to improved student learning. This will require serious reflection and clarification of the role that *directeurs* and their leadership teams in secondary schools play as pedagogical leaders. Further, the OECD recommends establishing an external school evaluation mechanism and this could considerably strengthen the pedagogical leadership of the *inspecteurs*. Finally, within the MENFP, it would be helpful to clarify different responsibilities and to ensure greater coherence in the development of evaluation and assessment policies and tools for schools. Such planning should pay careful consideration to current capacity and assess the need to build and develop evaluation and assessment competencies where necessary.

Raise the focus on equity within the evaluation and assessment framework and evaluate the implementation of competency-based learning objectives

While the need to monitor equity is one of the stated drivers behind the initial conceptualisation of an evaluation and assessment framework in Luxembourg, the OECD review team sees a need to further raise the focus on equity within the evaluation and assessment framework. In particular, the OECD review team recommends a thorough review of the procedures in place for the orientation of students at age 11 into different types of secondary education. National and international data clearly demonstrate that the current procedures disproportionately impact certain student groups. The innovative piloting approach taken by the MENFP may also be useful to examine the benefits to complementing the traditional *Lëtzebuergesch* instruction in Cycle 1 with instruction in German and French for certain children. There is room for the MENFP to make better use of the results of both non-standardised and standardised national assessment results to moderate teacher grading in high-stakes student assessment. Finally, the planned review of the implementation of the competency-based student learning objectives should examine to what extent these can be better harmonised across general and technical streams of secondary education. As it stands, the risk is that these simply follow the existing structure of the school system and miss the opportunity to promote greater flexibility for student transition among the different streams. As part of this process, it will be important to review evidence from various stakeholders (students, teachers and parents, notably). In further refining these, the OECD review team would recommend a more formal and systematic approach to the development and implementation of student learning objectives. To ensure greater engagement of teachers it would be important to ensure that teachers feel that they are partners in this process. This means that they have a representative voice and actively work toward the development of student learning objectives and related assessment tools.

Build evaluation and assessment capacity throughout the school system

The development of a coherent and effective evaluation and assessment framework necessitates considerable investment to develop evaluation and assessment capacity at the class, school and school system levels. New initiatives in student assessment and school self-evaluation have generated ample information for teachers, parents and schools. However, the generation of information and results is not of use if these cannot be analysed, interpreted and used to improve the learning situation for students. It is, therefore, extremely important that continued and adequate attention is paid to training teachers, *directeurs* and *inspecteurs* in how to work most effectively with the results of evaluation and assessment. In this context, the OECD review team commends the priority accorded to building school capacity for developing their strategic improvement plans and self-evaluating. The support offered by the ADQS is expected to have a positive impact on the implementation of these new school self-evaluation requirements. Further, the implementation of new internal school structures for school development should be monitored to determine the type of training and capacity building support they require. This will be a good investment to build evaluation capacity internally within schools on a more sustainable basis. Finally, the OECD review team has recommended that the MENFP consider establishing an external school evaluation mechanism. In any case, it is clear that the current responsibilities that fall within the ADQS need to be either

redistributed within the MENFP or that the ADQS be given increased capacity. The implementation of the evaluation and assessment framework is at a critical stage and the continued prioritisation of capacity building at the school and national levels is more important than ever to ensure that the results of evaluation and assessment lead to improvements in student learning.

Establish a coherent framework for student assessment and strengthen oversight of national student assessments

To improve stakeholder understanding and acceptance of the various student assessment initiatives, the OECD review team recommends establishing a coherent framework for current student assessments detailing: how the various assessment initiatives are linked; the rationale, purpose and goals for each assessment; the technical methodology for each assessment; and the reporting scheme and intended use of results for each assessment. A priority would be to provide public documentation on methodologies surrounding the major student tests. A thorough explanation and clarification of the purposes of each type of assessment and the type of inferences that can be made from the results of these will help all stakeholders to understand and work with these constructively. Further, there is room to further strengthen oversight of national test development. This means the co-ordination of any assessment activities, primarily regarding their overall direction, the assessment content and the most appropriate reporting methods. It is of equal importance to ensure the systematic involvement of a balanced and representative range of key stakeholders in the development of assessments and to avoid an approach that may be perceived as *ad hoc*. This may involve establishing an independent body with authority to advise on strategic test development.

Improve teachers' ability to effectively use student assessment results to improve student learning

The OECD review team commends efforts to implement a competency-based approach to learning. Documenting individual student progress and achievement while associating these with a plan to achieve well-established goals provides background for teachers and facilitates their adapting instruction to individual student needs. In further promoting teachers' use of student assessment results, the OECD review team recommends a two-fold approach. First, there is scope to more effectively feed back the results from standardised tests to teachers, notably, by providing results for individual students, but also by providing analytical software packages that teachers can use to compare results for particular groups of students to national, school or class averages. Second, there is room to provide targeted professional development to teachers on how to integrate assessment into their teaching within the competency approach. This can include how to use the results from the national assessments, how to communicate them to students and how to adapt their teaching methods accordingly. It should also promote the use of centrally provided assessment tools and, importantly, help stimulate formative assessment across the system. The ADQS intends to offer schools support in the interpretation and use of national test results in 2012, which is expected to better tailor support to teacher needs and not only the interpretation of results at the school level.

Prioritise strategies to meet equity challenges in high-stakes student assessment

A major challenge to equity is to improve the opportunities for students who may not master French or German during fundamental education to access general secondary education. In this context, the OECD review team recommends a review of the orientation procedure at the end of fundamental education. Serious reflection is required to identify strategies to reduce the influence of student proficiency in French and German in high-stakes assessment. Formative assessments, continuous feedback and opportunities for self-assessments play vital roles in second language learning as students need to be informed of their progress – particularly in French and German – in order to take control of their learning process. Further, the OECD review team underlines the need to develop processes to increase consistency of grading in student assessments, particularly where these have high stakes for students. The provision of detailed scoring rubrics at secondary level and the involvement of teachers in developing scoring for national assessments need to be complemented with opportunities for professional development, plus importantly, the systematic collaboration of teachers in grading student assessment. Finally, it is important to ensure and carefully document the necessary adaptations of standardised tests for students with special educational needs. Adaptations of assessment materials are not simple and may impact the comparability of results across the student population, but may be necessary in order to obtain accurate and valid information for all students.

Develop teaching standards aligned with student learning objectives and use these as a basis for a career structure

A national framework of teaching standards is essential as a reference for teacher appraisal. The development of a profile of teacher competencies should be based on the national student learning objectives and could benefit from the expertise gained in developing the learning objectives and descriptions of related skills for students. 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. 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. Such teaching standards would form the basis for a career structure stating the level of expertise required at different key stages. Each stage would be associated with distinct roles and responsibilities in schools and access to each stage could be associated with formal processes of appraisal through a system of teacher certification. The certification process could be a mostly school-based process led by the teacher's hierarchical superior (*inspecteur* or *directeur*), 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. The latter would seek to ensure the fairness of appraisals across schools. The completion of the probationary period could correspond to the access of the first stage in the career as "competent teacher".

Reinforce the pedagogical leadership of the inspecteurs and directeurs and strengthen focus on developmental appraisal

Teacher appraisal will only succeed in raising educational standards if the *inspecteurs* and *directeurs* take direct responsibility for exerting pedagogical leadership and for the quality of education in their schools. Therefore the recruitment, initial preparation, professional development and evaluation of school leaders are of key importance. This reinforces the case for rethinking school leadership in fundamental education so each school benefits from a dedicated leadership team. Also, the concept of shared leadership needs to be more firmly embedded in schools, to support existing leaders and allow them to concentrate on their instructional role. In particular, deputies, heads of department, cycle co-ordinators and senior teachers should be pedagogical leaders and role models in their own right. A priority is to provide adequate training in teacher appraisal to school leaders, *e.g.* conducting structured interactions with teachers, setting objectives, linking school objectives to personnel development plans, using evidence on teaching quality, developing instruments and strategies to use appraisal results. It is also important to strengthen the focus on teacher appraisal for improvement purposes (*i.e.* developmental appraisal). This would be fully internal to the school, be based on both the national teaching standards and school-specific criteria and developmental objectives. The main outcome would be feedback on teaching performance and overall contribution to school development, which would lead to a plan for professional development. It can build on identified best practices of current interactions between teachers and *inspecteurs* or *directeurs* but would need to be more formalised. Again, shared leadership will be essential here in building capacity for appraisal methods at the school level, in particular, the special support teacher (*instituteur-ressources*) could play a key role. Further, considerations to introduce an external element to school evaluation should include the audit of the processes in place to organise developmental evaluation, holding either the *inspecteur* or the *directeur* accountable as necessary.

Implement an external school evaluation mechanism

Introducing an external school evaluation mechanism will both support and strengthen the internal evaluation and development planning (in both fundamental and secondary schools), and confront schools with a common, external perspective and information on their quality. External school evaluations can bring greater depth and breadth to internal evaluations in schools by providing useful observations and evidence from other schools, challenging the school's development plan and self-evaluation criteria, and evaluating the school's capacity for self-evaluation. External evaluators should not be involved in school management and co-ordination tasks to ensure objective and robust evaluations, for example, they could be part of the MENFP or a new independent external evaluation agency. As a result, the role of *inspecteurs* in fundamental schools and *directeurs* in secondary schools should be redefined to focus entirely on management, co-ordination and pedagogical leadership of schools. It is expected that this, together with clear professional requirements to conduct teacher appraisal and build evaluation expertise, plus guidelines and frameworks for self-evaluation, would further strengthen the internal evaluation process.

Improve the alignment between school development plans and national objectives and introduce incentives for school improvement

In Luxembourg, the most important challenge is to align the national targets for school improvement and competency-based reform to the school internal goals and evaluation criteria in the school development plan. Such an alignment will enable schools to use the national standardised student achievement results to improve the teaching and learning in their school. Alignment can be improved by: ensuring the full and timely feedback to schools of student results in the standardised tests; introducing reporting requirements for schools, *e.g.* adding a section to their school development plan in which they describe how they will implement national reforms such as the competency-based student learning objectives, how they will align their curricula and teaching to these and how they will evaluate their implementation. These reporting requirements will on the one hand increase awareness in schools of national reforms and student learning objectives and demand schools to strategise and be transparent about how to implement these. The reporting requirements create on the other hand an opportunity for the MENFP to monitor the implementation of the student learning objectives in a structured manner (instead of through informal communication with *inspecteurs*) and to make amendments when necessary. Potential external evaluators can also use these reports to evaluate schools. Incentives are essential components of evaluation systems as they impose stakes on schools to meet certain evaluation criteria and implement necessary improvement actions. In Luxembourg, rewards and sanctions related to (the improvement of) teaching and learning of students should be targeted at teachers, while *directeurs* and *inspecteurs* should be rewarded or sanctioned for improving school-level conditions such as creating a coherent curriculum throughout the school. Rewards can for example include financial bonuses for high performance, or merit-based salaries. Other sanctions may include increased external monitoring and follow-up of schools and targeted external interventions.

Devise an analytical framework for education system evaluation and validate and further develop the monitoring system as necessary

The OECD review team commends the development of a monitoring system in Luxembourg. As a key element of this, the standardised tests should be evaluated to ensure they deliver: valid measures against discrete areas of the national competency-based learning objectives; high reliability of results for comparison throughout the system; and stable core content to allow comparability of results across years. There should also be clear documentation and understanding of the suitability of these tests for students with different developmental needs. Further, it is essential that the MENFP establish an overall analytical framework for education system evaluation. Currently, information is collected and analysed for discrete areas (typically sectoral) and does not allow an understanding of relative policy priorities throughout the system. On the basis of the five-year political agenda and the new competency-based learning objectives, the MENFP should clarify key objectives and set specific goals or targets for the school system (for both quality and equity); systematically map out available measures and include technical notes on validity and/or limitations for interpretation; identify key gaps in data availability and limitations of existing measures; and develop a strategic plan to extend the monitoring system as necessary. This may entail the collection of feedback from students, teachers and parents on different aspects of the reform and the cyclical administration of tests on a wider set of student learning outcomes.

Build analytical capacity and improve reporting of system-level information to show progress against learning objectives

The creation of the ADQS represents a political commitment to the importance of education system evaluation in Luxembourg. To establish credibility for the monitoring system, a key priority is to continue to build analytical capacity at the national level. The MENFP must ensure the statistical, analytical and research competencies to fully exploit existing information on the education system for policy development. The adequate analysis, interpretation and reporting of key results in a way that makes them accessible to all stakeholders will build support for education system evaluation and also promote the discussion of such results throughout the system. The publication of a regular overview report on the state of the education system is strongly recommended. The clear and comprehensive reporting in system-level publications against the national student learning objectives will play a vital role in promoting the acceptance and implementation of the new student learning objectives in schools throughout Luxembourg. In particular, the reporting of results from the national standardised tests should lead the way, *e.g.* by reporting of the proportion of students overall by performance category: standards attained with reserve; standards attained; advance level; level of excellence. Further, there is room to actively promote discussion among key stakeholders of the major results from the national standardised and non-standardised assessments. This would offer an opportunity to promote deeper understanding of the learning objectives and timely feedback to the MENFP and the test developers.

Annex A. The OECD Review on Evaluation and Assessment Frameworks for Improving School Outcomes

The OECD Review on Evaluation and Assessment Frameworks for Improving School Outcomes 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 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 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-three countries 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. Fourteen 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*.

Notes

1. The scope of the Review does not include early childhood education and care, apprenticeships within vocational education and training, and adult education.

2. The project's purposes and scope are detailed in the OECD (2009) document entitled "OECD Review on Evaluation and Assessment Frameworks for Improving School Outcomes: Design and Implementation Plan for the Review", which is available from the project website *www.oecd.org/edu/evaluationpolicy*.

Annex B. Visit itinerary

Luxembourg, 31 May – 4 June 2010

Monday 31 May

08:30–10:00	Ministry of National Education and Vocational Training (MENFP) Division for Co-ordination of Pedagogical and Technological Research and Innovation (SCRIPT)
10:00–11:30	Ministry of National Education and Vocational Training (MENFP) Divisions for Primary Schooling (*Enseignement Fondamental, EF*), General Secondary (*Secondaire, ES*) and Technical Secondary (*Secondaire Technique, EST*) and Vocational Training
11:30–12:15	Ministry of National Education and Vocational Training (MENFP) Division for Special education (*Éducation différenciée*) Centre for School Psychology and Orientation (CPOS)
14:00–15:00	Organisation of *Inspecteurs* of Fundamental Education (*Collège des inspecteurs*)
15:00–16:00	Organisation of Secondary School *Directeurs* (*Collège des directeurs*)
17:00–18:00	Educational Measurement and Applied Cognitive Science (EMACS)

Tuesday 1 June

09:00–12:00	School visit – Lycée Athénée de Luxembourg Meeting with school leadership team Meeting with a group of teachers Meeting with a group of parents and students
12:30–16:00	School visit – Neie Lycée Meeting with school leadership team Visit with students on studies and activities Meeting with a group of teachers
16:30–17:15	National Commission for Programmes (*Commission National des programmes, CNP*)
17:15–18:00	Initial Teacher Education Meeting with Studies Director, initial education; Head of Continuing Training; Head of Pedagogical Education for secondary teachers

Wednesday 2 June

09:00–12:00	School visit – Lycée Technique Josy Barthel Mamer Meeting with school leadership team Meeting with a group of teachers Meeting with a group of parents and students
13:30–16:30	School visit –École de Nocher – Goesdorf Meeting with President of School Committee Meeting with a group of teachers Meeting with a group of parents
17:00–18:00	Teacher Unions National Teacher Union (*Syndicat National des Enseignants, SNE*) Association for Teachers in Secondary and Higher Education (*Association des Professeurs de l'Enseignement Secondaire et Supérieur, APESS*) Federation of State Universities (*Fédération des universitaires au service de l'État, FEDUSE*)
18:00–18:30	Parent Unions Federation of Parent Assosications in Luxembourg (*Fédération des Associations de Parents d'Élèves du Luxembourg, FAPEL*)

Thursday 3 June

09:00–12:00	Review team meeting
12:30–13:00	Meeting with the Minister (Madame la Ministre – Mady Delvaux-Stehres) and Senior Advisor, General Co-ordination
13:30–16:30	School visit – École Fondamentale de Brill Meeting with *Inspecteur* and President of School Committee Meeting with a group of teachers Meeting with a group of parents and students

Friday 4 June

08:30–11:30	School visit – École Luxembourg – Bonnevoie / Demy Schlechter Meeting with *Inspecteur* and President of School Committee Meeting with a group of teachers Meeting with a group of parents and students
12:00–13:00	Chambers of Commerce Deputy Director, Chamber for Trades (*Chambre des métiers, CDM*)
14:00–15:00	MENFP Statistics and Analysis Division
15:00–16:00	Researchers (University of Luxembourg)
16:30–17:30	Preliminary conclusions

Annex C. Composition of the review team

Melanie Ehren, a Dutch national, is an assistant professor, working on research into effects and side effects of accountability systems and standards-based reform. Her research started with a PhD on effects of school inspections. In this research she used novel techniques such as a policy theory evaluation to reconstruct the assumptions on effects of school inspections. Melanie participates in the International Project for the Study of Educational Accountability Systems (IPEA). In the past, she also worked as a policy advisor at the University of Amsterdam, as a programme co-ordinator on accountability and inspection at the association of Expertise on Vocational Education, Training and the Labour Market centres (Colo), and as educational manager at the University of Professional Education in Rotterdam. In that position she was responsible for the accreditation of one of the bachelor degrees.

Morten Rosenkvist, a Norwegian national, was working on the OECD Review on Evaluation and Assessment Frameworks for Improving School Outcomes on secondment from the Norwegian Ministry of Education and Research at the time of the review visit. Morten has a Master's degree in political science from the University of Oslo. He has also studied at the University of Sydney. For the last four years Morten has worked as an analyst in the Norwegian Ministry of Education of Research. He is especially familiar with research relating to teachers and teacher training. Before his arrival to Paris, Morten was project manager for "GNIST" – a government initiative to recruit more and better qualified teachers to Norwegian schools.

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 20 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 and acted as *Rapporteur* for the review team.

Claudia Tamassia, a Brazilian national, is a programme administrator lead in the US-based Educational Testing Service (ETS) whose current responsibility is to co-ordinate the OECD's Programme for the International Assessment of Adult Competencies (PIAAC). Prior to that, Claudia worked with the Chicago Public Schools co-ordinating assessment for the High School Transformation Project and assisting in the development of constructed response questions for the Mathematics Benchmark Assessment and in the development of the Algebra Grade 8 Exit Exam. From 1999 to 2004, Claudia managed the successful implementation and analysis of the first two surveys of the OECD's Programme for International Student Assessment (PISA). She has also worked for the Ministry of Education in Brazil and has consulted for UNESCO and the Australian Council for Educational Research (ACER) and has authored numerous papers and publications on student assessment.

Annex D. Comparative indicators on evaluation and assessment

Table E.1 Educational outcomes in international comparison

	Luxembourg	International benchmark[1]	Luxembourg's rank[2]
EDUCATIONAL ATTAINMENT			
Source: OECD, 2011			
% of population that has attained at least upper secondary education, by age group (excluding ISCED 3C short programmes)[3] (2009)			
Ages 25-64	77	73	17/33
Ages 25-34	84	81	=19/33
Ages 35-44	79	77	18/33
Ages 45-54	74	71	16/33
Ages 55-64	70	61	15/33
% of population that has attained tertiary education, by age group (2009)			
Ages 25-64	35	30	=13/34
Ages 25-34	44	37	10/34
Ages 35-44	38	32	=12/34
Ages 45-54	29	27	=15/34
Ages 55-64	25	22	=15/34
Average annual growth rate in levels of educational attainment from 1999 to 2009			
Below upper secondary	-6.4	-3.4	a
Upper secondary and post-secondary non-tertiary	1.3	0.9	a
Tertiary education	6.6	3.7	a
Upper secondary graduation rates (2009)			
% of upper secondary graduates (first-time graduation) to the population at the typical age of graduation	69	82	24/27
STUDENT PERFORMANCE			
Source: OECD, 2010a			
Performance at age 15 (Programme for International Student Assessment, PISA)			
Mean performance (2009) in:			
Reading literacy	472	493	30/34
Mathematics literacy	489	496	24/34
Science literacy	484	501	29/34
Proportion of students by reading proficiency in % (2009):			
Top performers (% of students proficient at Levels 5 or 6)	5.7	7.6	a
Lowest performers (% of students proficient below Level 2)	26.0	18.8	a

Table E.2 Contextual statistics in international comparison

	Luxembourg	International benchmark[1]	Luxembourg's rank[2]
SCHOOL SYSTEM EXPENDITURE			
Source: OECD, 2011			
Expenditure on primary, secondary and post-secondary non-tertiary institutions as a % of GDP, from public and private sources			
1995	m	~	m
2000	m	~	m
2008	2.9	3.8	29/32
Public expenditure on primary, secondary and post-secondary non-tertiary education as a % of total public expenditure (2008)[4]	7.6	8.7	22/32
Total expenditure on primary, secondary and post-secondary non-tertiary education from public sources (2008) (%)	97.4	91.0	7/31
Annual expenditure per student by educational institutions, (2008) (USD)[5]			
Primary	13 648	7 153	1/31
Lower secondary	19 791	8 498	1/29
Upper secondary	20 002	9 396	1/30
All secondary	19 898	8 971	1/32
Change in expenditure per student by educational institutions, primary, secondary and post-secondary non-tertiary education, index of change between 1995, 2000 and 2008 (2000 = 100)			
1995	m	87	m
2008	m	134	m
Current expenditure – composition, primary, secondary and post-secondary non-tertiary education (2008)[6]			
Compensation of teachers	78.9	63.2	3/20
Compensation of other staff	10.7	15.6	17/20
Compensation of all staff	89.7	79.0	3/30
Other current expenditure	10.4	21.0	28/30
SCHOOL STAFF NUMBERS			
Source: OECD, 2011[7]			
Ratio of students to teaching staff (2009) [8]			
Primary	11.6	16.0	6/30
Lower Secondary	m	13.5	a
Upper Secondary	m	13.5	a
All Secondary	9.1	13.5	2/32
TEACHER SALARIES in public institutions			
Source: OECD, 2011			
Primary – starting salary (USD)	51 799	29 767	1/34
Primary – 15 years experience (USD)	74 402	38 914	1/33
Primary – top of scale (USD)	113 017	48 154	1/32
Primary – ratio of salary at top of the scale to starting salary	2.18	1.64	29/34
Lower secondary – starting salary (USD)	80 053	31 687	1/33
Lower secondary – 15 years experience (USD)	100 068	41 701	1/32
Lower secondary – top of scale (USD)	139 152	51 317	1/33
Lower secondary – ratio of salary at top of the scale to starting salary	1.74	1.64	=11/33
Upper secondary – starting salary (USD)	80 053	33 044	1/33
Upper secondary – 15 years experience (USD)	100 068	43 711	1/32
Upper secondary – top of scale (USD)	139 152	53 651	1/33
Upper secondary – ratio of salary at top of the scale to starting salary	1.74	1.64	=12/33
Number of years from starting to top salary (lower secondary education) (2009)[9] *NB*: Shortest = 6 years (Scotland); Longest = 40 years (Hungary)	30	24	=18/31

	Luxembourg	International benchmark[1]	Luxembourg's rank[2]
Decisions on payments for teachers in public schools (2009)			
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	●	●33 ■ 10 Δ 9	
Management responsibilities in addition to teaching duties	a	●14 ■20 Δ8	
Teaching more classes or hours than required by full-time contract	Δ	●3 ■15 Δ19	
Special tasks (career guidance or counselling)	Δ	●6 ■17 Δ14	
Teaching in a disadvantaged, remote or high cost area (location allowance)	a	●13 ■19 Δ5	
Special activities (*e.g.* sports and drama clubs, homework clubs, summer schools etc.)	a	●2 ■12 Δ14	
Teaching students with special educational needs (in regular schools)	●	●11 ■13 Δ8	
Teaching courses in a particular field	a	●5 ■6 Δ4	
Holding an initial educational qualification higher than the minimum qualification required to enter the teaching profession	a	●20 ■10 Δ5	
Holding a higher than minimum level of teacher certification or training obtained during professional life	●	●17 ■13 Δ3	
Outstanding performance in teaching	a	●6 ■10 Δ13	
Successful completion of professional development activities	●	●15 ■10 Δ4	
Reaching high scores in the qualification examination	a	●4 ■3 Δ3	
Holding an educational qualification in multiple subjects	a	●3 ■6 Δ4	
Family status (married, number of children)	■	●3 ■10 Δ1	
Age (independent of years of teaching experience)	●	●5 ■4 Δ2	
Other	a	●2 ■8 Δ3	

Table E.3 Indicators on education system evaluation, school evaluation, teacher appraisal and student assessment in Luxembourg

	Luxembourg	International benchmark[1]	Luxembourg's rank[2]
EDUCATION SYSTEM EVALUATION			
Curriculum and examination regulations, public schools only Source: OECD, 2010c; OECD, 2011			
Primary education			
A standard curriculum or partially standardised curriculum is required (2008)	Yes	Yes: 27 No: 2	
National examination offered[10] (2009)	No	Yes: 3 No: 29	
Of which compulsory in public schools	a	Yes: 2	
National assessment offered[11] (2009)	Yes	Yes: 27 No: 5	
Of which compulsory in public schools	Yes	Yes: 16 No: 11	
Lower secondary education			
A standard curriculum or partially standardised curriculum is required (2008)	Yes	Yes: 27 No: 2	
National examination offered[10] (2009)	No	Yes: 13 No: 18	
Of which compulsory in public schools	a	Yes: 11 No: 2	
National assessment offered[11] (2009)	Yes	Yes: 19 No: 13	
Of which compulsory in public schools	Yes	Yes: 13 No: 5	
Subjects covered in national examinations[10] (lower secondary education) (2009) Source: OECD, 2011			
Mathematics	a	Yes: 12	
Science	a	Yes: 11 No: 3	
National language or language of instruction	a	Yes: 13	
Social Studies	a	Yes: 8 No: 4	
Modern Foreign Languages	a	Yes: 10 No: 2	
Technology	a	Yes: 4 No: 8	
Arts	a	Yes: 5 No: 8	
Religion	a	Yes: 4 No: 9	
Practical and Vocational Skills	a	Yes: 4 No: 7 Varies: 1	
Other subjects	a	Yes: 2 No: 10	
Subjects covered in national assessments[11] (lower secondary education) (2009) Source: OECD, 2011			
Mathematics	Yes	Yes: 19	
Science	No	Yes: 9 No: 10	
National language or language of instruction	Yes	Yes: 18	
Social Studies	No	Yes: 5 No: 12	
Modern Foreign Languages	Yes	Yes: 8 No: 122	
Technology	a	Yes: 2 No: 16	
Arts	No	Yes: 3 No: 16	
Religion	No	No: 19	
Practical and Vocational Skills	No	No: 19	
Other subjects	No	Yes: 1 No: 17	
Possible influence of national examinations[10] (2009) Source: OECD, 2011			
Evaluation of school performance	High	None:2 Low:1 Moderate:6 High:8	
Evaluation of school administration	None	None:9 Low:3 Moderate:3 High:2	
Evaluation of individual teachers	Low	None:4 Low:4 Moderate:7 High:2	
The size of the school budget	None	None:13 Low:3 Moderate:1 High:0	
The provision of another financial reward or sanction	None	None:13 Low:3 Moderate:0 High:0	
The assistance provided to teachers to improve their teaching skills	Low	None:7 Low:5 Moderate:3 High:1	
Remuneration and bonuses received by teachers	None	None:13 Low: 2 Moderate:1 High:0	
Likelihood of school closure	None	None:12 Low: 2 Moderate:2 High:0	
Possible influence of national assessments[11] (2009) Source: OECD, 2011			
Evaluation of school performance	High	None:3 Low:1 Moderate:8 High:7	
Evaluation of school administration	Low	None:8 Low:6 Moderate:3 High:3	
Evaluation of individual teachers	Low	None:8 Low:4 Moderate:6 High:4	
The size of the school budget	None	None:19 Low:1 Moderate:1 High:0	
The provision of another financial reward or sanction	None	None:18 Low:2 Moderate:0 High:0	
The assistance provided to teachers to improve their teaching skills	High	None:8 Low:3 Moderate:7 High:3	
Remuneration and bonuses received by teachers	None	None:15 Low: 0 Moderate:3 High:1	
Likelihood of school closure	None	None:16 Low: 1 Moderate:2 High:1	

	Luxembourg	International benchmark[1]	Luxembourg's rank[2]
Reporting of results from national examinations[10] (lower secondary education) (2009) Source: OECD, 2011			
Based on norm or criterion reference	a	Norm:2 Criterion: 10	
Results are shared with:			
External audience in addition to education authorities	a	Yes: 12	
School administrators directly	a	Yes: 11 No: 1	
Classroom teachers directly	a	Yes: 10 No: 2	
Parents directly	a	Yes: 10 No: 2	
Students directly	a	Yes: 12	
The media directly	a	Yes: 7 No: 5	
Features of results reporting			
Performance level for most recent year	a	Yes: 10 No: 3	
"Value added" or growth in student achievement based on student progress over 2(+) years	a	Yes: 2 No: 10	
Context sensitive	a	Yes: 2 No: 10	
Compared with other groups or populations of students	a	Yes: 6 No: 6	
Reported together with other indicators of school quality	a	Yes: 4 No: 7	
Used by authorities external to the school for sanctions or rewards	a	Yes: 4 No: 7	
Reporting of results from national assessments[11] (lower secondary education) (2009) Source: OECD, 2011			
Based on norm or criterion reference	Criterion	Norm:7 Criterion:13	
Results are shared with:			
External audience in addition to education authorities	No	Yes:18 No:1	
School administrators directly	a	Yes:18 No:0	
Classroom teachers directly	a	Yes:13 No:5	
Parents directly	a	Yes:13 No:5	
Students directly	a	Yes:13 No:4	
The media directly	a	Yes:10 No:8	
Features of results reporting	a		
Performance level for most recent year		Yes:10 No:3	
"Value added" or growth in student achievement based on student progress over 2(+) years	a	Yes:5 No:13	
Context sensitive	a	Yes:7 No:7	
Compared with other groups or populations of students	a	Yes:10 No:4	
Reported together with other indicators of school quality	a	Yes:3 No:12	
Used by authorities external to the school for sanctions or rewards	a	Yes:3 No:13	
Existence of national tests (2008-09) Source: Eurydice, 2009	No	Yes:29 No:5	
Number of national tests (2008-09) (primary and lower secondary education) Source: Eurydice, 2009			
Compulsory tests	3	2.7	=4/22
Sample tests	a	2.3	
Optional tests[12]	a	2.3	
Years of testing	Primary:3; 6 Secondary:5		
Number of subjects covered in national tests[13]	3	3 subjects :11 3+ subjects:13 2 subjects:14 Does not apply:5	
Main aims of nationally standardised tests (2008-09) (primary and lower secondary education) Source: Eurydice, 2009			
Taking decisions about the school career of pupils	Yes	No:17 Yes:13	
Monitoring schools and/or the education system	No	No:9 Yes:21	
Identifying individual learning needs	Yes	No:12 Yes:18	
Bodies responsible for setting national tests (2008-09) (primary and lower secondary education) Source: Eurydice, 2009			
●Tests for taking decisions about the school career of pupils/ ■Tests for other purposes/ Δ No national tests			
A unit/agency within the ministry of education without external players	a	●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	a	●11 ■16 Δ5	
A private body or university department	●■	●4 ■4 Δ5	
People in charge of administering national tests (2008-09) (primary and lower secondary education) Source: Eurydice, 2009			
●Tests for taking decisions about the school career of pupils/ ■Tests for other purposes/ Δ No national tests			
Class teachers	●■	●10 ■15 Δ5	
Class teachers + external people	a	●1 ■3 Δ5	
Other teachers from the same school	a	●3 ■3 Δ5	

	Luxembourg	International benchmark[1]	Luxembourg's rank[2]
Other teachers from the same school + external people	a	●1 ■4 Δ5	
External people alone	a	●3 ■5 Δ5	
Persons in charge of marking national tests (2008-09) (primary and lower secondary education) Source: Eurydice, 2009 ●Tests for taking decisions about the school career of pupils/ ■Tests for other purposes/ Δ No national tests			
Class teachers	●■	●7 ■10 Δ5	
Class teachers + external people	a	●4 ■2 Δ5	
Other teachers from the same school	a	●1 ■3 Δ5	
Other teachers from the same school + external persons	a	●0 ■1 Δ5	
External persons alone	a	●8 ■16 Δ5	
Standardisation of test questions (2008-09) (primary and lower secondary education) Source: Eurydice, 2009			
Questions are the same for all pupils taking one national test	Yes	Yes:19 No:11	
Questions are not the same for all pupils taking one national test	No	Yes:6	
Whether test questions are standardised or not varies depending on type of test	No	Yes:2	
Use of ICT in national testing (2008-09) (primary and lower secondary education) Source: Eurydice, 2009			
ICT is currently used in national tests	Yes	Yes:11 No:19	
Use of ICT for on-screen testing	No	Yes:3	
Use of ICT for marking tests	Yes	Yes:8	
Participation of students with special educational needs (SEN) in national testing (2008-09) (primary and lower secondary education) Source: Eurydice, 2009			
Pupils with SEN may take part in national testing	Yes	Yes:27 No:3	
Participation in national testing for pupils with SEN is compulsory	Yes	Yes:12	
Participation in national testing for pupils with SEN is optional	No	Yes:9	
Participation varies depending on type of test, level of education or type of school	a	Yes:5	
Communication of the results of national tests to local authorities (2008-09) (primary and lower secondary education) Source: Eurydice, 2009			
Local authorities have access to aggregated results for their own area	No	Yes:17	
Use of achievement data for accountability (2009) (15-year-olds) Source: OECD, 2010c			
% of students in schools where the principal reported that achievement data are used in the following procedures			
Posted publicly	37.0	36.6	13/33
Used in evaluation of the principal's performance	19.9	36.1	21/33
Used in evaluation of teachers' performance	8.2	44.8	33/33
Used in decisions about instructional resource allocation to the school	32.9	32.7	15/33
Tracked over time by an administrative authority	74.4	66.2	16/33
SCHOOL EVALUATION			
School inspection (2009) Source: OECD, 2011			
Primary education	No	Yes: 23 No: 7	
Upper secondary education	No	Yes: 24 No: 7	
Lower secondary education	No	Yes:22 No:7	
School inspections are a component of the school accreditation process (lower secondary education)	a	Yes:6 No:16	
School inspections target low performance schools (lower secondary education)	a	Yes:8 No:13	
Extent to which school inspections are structured[14] (lower secondary education)	a	Highly:14 Partially:6 Unstructured:1	
Frequency of school inspections (lower secondary education, public schools only)	a	Every 3+ years: 9 Once every 3 years: 3 Once every 2 years: 1 Once per year: 2 More than once a year: 3 No requirements: 3	
Aspects addressed during school inspections (lower secondary education):			
Compliance with rules and regulations	a	Yes:20 No:1	
Financial management	a	Yes:13 No:8	
Quality of instruction	a	Yes:19 No:2	
Student performance	a	Yes:17 No:4	
Satisfaction and perceptions of students	a	Yes:14 No:7	
Satisfaction and perceptions of parents	a	Yes:13 No:8	
Satisfaction and perceptions of staff	a	Yes:13 No:8	

	Luxembourg	International benchmark[1]	Luxembourg's rank[2]
School inspection results are shared with (lower secondary education):			
External audience in addition to education authorities	a	Yes:19 No:3	
Higher level education authorities directly	a	Yes:16 No:3	
School administrators directly	a	Yes:19 No:0	
Classroom teachers directly	a	Yes:16 No:3	
Parents directly	a	Yes:11 No:8	
Students directly	a	Yes:8 No:10	
The media directly	a	Yes:9 No:10	
Possible influence of evaluation by school inspectorate (or equivalent) (2009)			
Source: OECD, 2011			
Performance evaluation			
School performance	Low	None:2 Low:4 Moderate:4 High:11 Not applicable: 5	
School administration	Low	None:3 Low:3 Moderate:7 High:8 Not applicable: 5	
Individual teachers	Moderate	None:3 Low:3 Moderate:7 High:7 Not applicable:8	
Rewards and sanctions			
The size of the school budget	Low	None:11 Low:8 Moderate:1 High:0 Not applicable:6	
The provision of another financial reward or sanction	a	None:9 Low:4 Moderate:2 High:3 Not applicable:7	
The assistance provided to teachers to improve their teaching skills	Low	None:2 Low:5 Moderate:9 High:5 Not applicable:5	
Remuneration and bonuses received by teachers	a	None:13 Low:0 Moderate:3 High:0 Not applicable:9	
Likelihood of school closure	a	None:7 Low:1 Moderate:2 High:9 Not applicable:7	
Requirements for school self-evaluations (2009) Source: OECD, 2011			
Primary education	No	Yes:21 No:10	
Component of school inspections	a	Yes:13 No:6	
Upper secondary education	No	Yes:23 No:10	
Component of school inspections	a	Yes:15 No:5	
Lower secondary education	No	Yes:20 No:10	
Component of school inspections	a	Yes:13 No:5	
Aspects addressed during school self-evaluations (lower secondary education)			
Compliance with rules and regulations	a	Yes:14 No:4	
Financial management	a	Yes:12 No:5	
Quality of instruction	a	Yes:17 No:1	
Student performance	a	Yes:16 No:2	
Satisfaction and perceptions of students	a	Yes:16 No:2	
Satisfaction and perceptions of parents	a	Yes:15 No:3	
Satisfaction and perceptions of staff	a	Yes:13 No:5	
School self-evaluation results are shared with (lower secondary education):			
External audience in addition to education authorities	a	Yes:16 No:3	
Higher level education authorities directly	a	Yes:9 No:7	
School inspectorates directly	a	Yes:11 No:1	
School administrators directly	a	Yes:14 No:1	
Classroom teachers directly	a	Yes:15 No:1	
Parents directly	a	Yes:10 No:6	
Students directly	a	Yes:8 No:7	
The media directly	a	Yes:5 No:10	
Extent to which school self-evaluations are structured (lower secondary education)	a	Highly:3 Partially:11 Unstructured:4	
Possible influence of school self-evaluations (2009)			
Source: OECD, 2011			
Performance evaluation			
School performance	Moderate	None:0 Low:4 Moderate:6 High:5 Not applicable:8	
School administration	Low	None:1 Low:6 Moderate:3 High:6 Not applicable:8	
Individual teachers	Low	None:2 Low:6 Moderate:2 High:5 Not applicable:9	

	Luxembourg	International benchmark[1]	Luxembourg's rank[2]
Rewards and sanctions			
The school budget	Low	None:9 Low:3 Moderate:1 High:2 Not applicable:9	
The provision of another financial reward or sanction	a	None:7 Low:5 Moderate:0 High:1 Not applicable:10	
The assistance provided to teachers to improve their teaching skills	Moderate	None:3 Low:3 Moderate:7 High:3 Not applicable:8	
Remuneration and bonuses received by teachers	a	None:6 Low:4 Moderate:1 High:0 Not applicable: 12	
Likelihood of school closure	a	None:7 Low:4 Moderate:1 High:1 Not applicable:11	
Use of student test results in school evaluation (2008-09) (primary and lower secondary education) Source: Eurydice, 2009			
Test results may be used for evaluation	No	Yes:15 No:15	
Test results used for external evaluation	No	Yes:5	
Recommendations or support tools for the use of results during internal evaluation	No	Yes:7	
Use varies depending on type of test, level of education or type of school	No	Yes:3	
Publication of individual school results in national tests (2008-09) (primary and lower secondary education) Source: Eurydice, 2009			
Individual school results may be published	No	Yes:10 No:20	
Publication organised, or required of schools, by central/local governments	No	Yes:9	
Publication at the discretion of schools	No	Yes:1	
Accountability to parents (2009) (15-year-olds) Source: OECD, 2010c			
% of students in schools where principals reported that their school provides parents with information on student performance:			
Relative to other students in the school	83.4	46.7	2/32
Relative to national or regional benchmarks	33.0	47.3	24/33
As a group relative to students in the same grade in other schools	10.2	23.5	26/33
TEACHER APPRAISAL			
Official methods for the individual or collective evaluation of teachers (2006-07) Source: Eurydice, 2008			
Teacher evaluation exists	No	Yes:30 No:3	
Teacher inspection on an individual or collective basis	No	Yes:22	
School self-evaluation	No	Yes:14	
Individual evaluation by school principals	No	Yes:16	
Individual evaluation by peers	No	Yes:5	
Methods used to monitor the practice of teachers (2009) (15-year-olds) Source: OECD, 2010c			
% 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	49.3	58.9	23/32
Teacher peer review (of lesson plans, assessment instruments, lessons)	38.0	56.8	24/32
Principal or senior staff observations of lessons	53.9	68.9	25/34
Observation of classes by inspectors or other persons external to the school	10.0	28.3	27/34
STUDENT ASSESSMENT			
The influence of test results on the school career of pupils (2008-09) (primary and lower secondary education) Source: Eurydice, 2009			
ISCED 1/ ISCED 2			
Award of certificates	a	ISCED 1:2	ISCED 2:12
Streaming	ISCED 1	ISCED 1:4	ISCED 2:2
Progression to the next stage of education	a	ISCED 1:1	ISCED 2:2
No national tests, or no impact on progression	ISCED 2	ISCED 1:29	ISCED 2:22
Completion requirements for upper secondary programmes Source: OECD, 2011 ● Final examination /■ Series of examinations during programme /▲ Specified number of course hours and examination / ♦ Specified number of course hours only[15]			
ISCED 3A	●■ Δ	●16 ○7 ■20 □2 ▲19 Δ2 ♦2 ◊ 1	
ISCED 3B	●■ Δ	●7 ○1 ■7 □1 ▲6 Δ1 ♦0	
ISCED 3C	●■ Δ	●13 ○6 ■18 □1 ▲16 Δ2 ♦1	

	Luxembourg	International benchmark[1]	Luxembourg's rank[2]
Student grouping by ability (2009) (15-year-olds) Source: OECD, 2010c			
% of students in schools where principals reported the following practice within the school			
No ability grouping	29.3	31.9	19/33
Ability grouping for some subjects	19.7	55.2	32/33
Ability grouping for all subjects	51.0	12.9	1/33
Groups of influence on assessment practices (2009) (15-year-olds)			
Source: OECD, 2010c			
% 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)	86.8	56.6	2/33
The school's governing board	22.0	29.5	19/33
Parent groups	4.0	17.3	30/33
Teacher groups (*e.g.* staff association, curriculum committees, trade union)	37.2	58.1	28/33
Student groups (*e.g.* student association, youth organisation	0.0	22.7	33/33
External examination boards	17.5	42.4	28/31
Frequency of student assessment by method (2009) (15-year-olds)			
Source: OECD, 2010c			
% of students in schools where the principal reported the student assessment methods below are used with the indicated frequency			
Standardised tests			
Never	1.0	24.4	33/33
1-5 times a year	96.4	68.7	2/33
At least once a month	2.6	6.9	19/33
Teacher-developed tests			
Never	3.6	1.6	a
1-5 times a year	12.7	36.8	28/33
At least once a month	83.7	61.7	9/33
Teachers' judgemental ratings			
Never	17.5	5.7	3/33
1-5 times a year	39.7	35.4	14/33
At least once a month	42.9	58.8	23/33
Student portfolios			
Never	39.3	23.4	8/33
1-5 times a year	52.8	56.4	20/33
At least once a month	7.9	20.1	28/33
Student assignments/projects/homework			
Never	0.0	1.0	a
1-5 times a year	36.4	28.2	7/33
At least once a month	63.6	70.8	25/33
Use of student assessments (2009) (15-year-olds)			
Source: OECD, 2010c			
% 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	100.0	98.1	a
To make decisions about students' retention or promotion	99.6	77.8	2/32
To group students for instructional purposes	45.4	50.5	18/33
To compare the school to district or national performance	53.5	53.5	17/33
To monitor the school's progress from year to year	40.3	76.7	32/33
To make judgements about teachers' effectiveness	21.7	47.5	31/33
To identify aspects of instruction or the curriculum that could be improved	60.0	77.4	28/33
To compare the school with other schools	34.7	45.9	21/33
% of students repeating one or more grades according to their own report (2009) (15-year-olds) Source: OECD, 2010c	36.5	13.0	2/34
Level of school autonomy regarding the criteria for the internal assessment of pupils (2006-07) (primary and lower secondary education) Source: Eurydice, 2008			
Full/Limited/No autonomy	Limited	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			
School responsibility involved	Yes	Yes:34	
School principal	No	Yes:0	
Teachers individually or collectively	No	Yes:13	
School management body	No	Yes:0	
Responsibilities vary depending on level of education	Yes	Yes:21	

	Luxembourg	International benchmark[1]	Luxembourg's rank[2]
School autonomy in preparing the content of examinations for certified qualifications (2006-07) (primary and lower secondary education)			
Source: Eurydice, 2008			
School responsibility involved/ examinations for certified qualifications exist	No	Yes:24 No:10	
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) (2006-07)			
Source: Eurydice, 2008			
School responsibility involved/ examinations for certified qualifications exist	No	Yes:5 No:29	
School principal	No	Yes:0	
Teachers individually or collectively	No	Yes:1	
School management body	No	Yes:0	
Responsibilities vary depending on level of education	No	Yes:4	

Notes for Tables E.1 and E.2

1. The international benchmark column provides comparative information in one of two forms: country average (calculated as the simple average of all countries/systems for which data are available, as indicated in the Source Guide below); distribution of countries/systems by result category (typically by the categories "Yes" and "No", but may also indicate the number of countries/systems in which a given criterion is used, *e.g.* for the indicator "Decision payments for teachers in public schools", 29 countries use "Base salary", 9 use "Additional yearly payment", etc.). With the exception of data taken from the Teaching and Learning International Study (TALIS) and Eurydice publications (in the Source Guide: OECD, 2009; Eurydice, 2008; Eurydice, 2009), the benchmark is for OECD countries only.
2. "Luxembourg's rank" indicates the position of Luxembourg when countries are ranked in descending order from the highest to lowest value on the indicator concerned. For example, on the indicator "Reading literacy", the rank 30/34 indicates that Luxembourg recorded the 30th highest value of the 34 countries/ systems for which data are available.
3. The International Standard Classification of Education (ISCED) is 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.

4. 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.
5. Expressed in equivalent USD converted using purchasing power parities.
6. 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.
7. Public and private institutions are included. Calculations are based on full-time equivalents. "Teaching staff" refers to professional personnel directly involved in teaching students.
8. Here "Luxembourg's rank" indicates the position of Luxembourg when countries are ranked in ascending order from the lowest to the highest ratio of students to teaching staff.
9. Here "Luxembourg's rank" indicates the position of Luxembourg when countries are ranked in ascending order from the shortest to the highest number of years that it takes to reach the top salary from the starting salary.
10. "National examinations" are tests which have formal consequences for students.
11. "National assessments" are tests which do not have formal consequences for students.
12. "Compulsory tests" have to be taken by all students, regardless of the type of school attended, or by all students in public sector schools. "Optional tests" are taken under the authority of schools.
13. Austria, the Flemish Community of Belgium, 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.
14. "Highly structured" means that similar activities are completed at each school based on a specific set of data collection tools. "Unstructured" means that activities at each site vary and depend on the strengths and weaknesses of the school.
15. In the case of empty symbols (○□Δ◊) the completion requirement within a country varies (*e.g.* in federal systems between states).

Sources:

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OECD (2010b), *Education at a Glance 2010: OECD Indicators*, OECD Publishing.
OECD (2010c), *PISA 2009 Results: What Makes a School Successful? Resources, Policies and Practices, Vol. IV*, OECD Publishing.
OECD (2010d), PISA 2009 database.
OECD (2011), *Education at a Glance 2011: OECD Indicators*, OECD Publishing.

Data explanation:

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

Source Guide

Participation of countries by source

	TALIS (OECD, 2009)	Education at a Glance (OECD, 2010b)	PISA 2009 (OECD, 2010a; OECD, 2010c)	Eurydice (2008; 2009)	Education at a Glance (OECD, 2011)
OECD countries					
Australia	●	●	●		●
Austria	●	●	●	●	●
Belgium			●		
Flemish Community	●	●	●	●	●
French Community		●	●	●	●
German Community				●	
Canada		●	●		●
Chile		●	●		●
Czech Republic		●	●	●	●
Denmark	●	●	●	●	●
Estonia	●		●	●	●
Finland		●	●	●	●
France		●	●	●	●
Germany		●	●	●	●
Greece		●	●	●	●
Hungary	●	●	●	●	●
Iceland	●	●	●	●	●
Ireland	●	●	●	●	●
Israel			●		●
Italy	●	●	●	●	●
Japan		●	●		●
Korea	●	●	●		●
Luxembourg		●	●	●	●
Mexico	●	●	●		●
Netherlands		●	●	●	●
New Zealand		●	●		●
Norway	●	●	●	●	●
Poland	●	●	●	●	●
Portugal	●	●	●	●	●
Slovak Republic	●	●	●	●	●
Slovenia	●		●	●	
Spain	●	●	●	●	●
Sweden		●	●	●	●
Switzerland		●	●		●
Turkey	●	●	●		●
United Kingdom					
England		●	●	●	●
Northern Ireland		●	●	●	
Scotland		●	●	●	●
Wales		●	●	●	
United States		●	●		●
Other					
Brazil	●				
Bulgaria	●			●	
Latvia				●	
Lichtenstein				●	
Lithuania	●			●	
Malaysia	●				
Malta	●			●	
Romania				●	

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